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Aligning Organization Stakeholders

To Operate towards a Common Service Goal

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They say that all good things must come to an end. As I write this preface and reflect on the past year, I want to give first and foremost give thanks to God, without whom this process for me would have been impossible. Through all the challenges faced through the year, changing jobs, health issues, I still managed to pull through.

The past one year, though extremely tasking, has been a great knowledge gaining experience. The expectations I had for the Masters in Logistics programme have greatly been surpassed. This is in effect due to the highly experienced and motivated lecturers, my classmates, the diversity of training methods and the professionalism of course delivery throughout the programme.

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Finally, I want to thank my close friends and the special lady in my life for allowing me to momentarily desert them so that I could focus on getting these studies completed. I will be looking forward to the summer to catch up on months of not being in touch.

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Espoo

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<p>The objective of this study is to develop an approach for the case company to align its organization's roles and key performance indicators(KPIs) for a new service. The case company has started a new service which requires three business units to work together to provide the service. Previously, these business units have been operating independently and in silos, and it is therefore crucial to have alignment between them as they work towards a common service goal.</p> <p>This study uses a qualitative case study approach. The study is done, by conducting qualitative analysis for the pilot customer with an aim of identifying (1) roles and responsibilities of stakeholders in the service and (2) KPIs for the service. The study revealed collaboration challenges within the case company due to ineffective communication and undefined roles that contribute to lack of ownership and accountability for KPIs.</p> <p>The outcome of this thesis is an approach which the case company can utilize to enhance communication, ensure accountability and build KPIs that intend to serve the purpose of the service. The study on existing literature, synthesized to a conceptual framework, offer the case company concrete steps in implementing the approach proposal. The proposal will in effect ensure the case company crystallizes the service offering internally to ensure the customer promise is met.</p>	
Keywords	CVP, Organizational Collaboration, RACI, KPIs

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1 Introduction

Global markets, and the Finnish market in particular, have in the recent past, undergone some tremendous changes especially in the way supply chains operate. Increased competition has forced companies to shift focus to their core business to ensure continuous improvement in the competitiveness of their products. Thus, functions such as logistics, that essentially do not add value to the final product, are increasingly being outsourced to logistics providers and often becomes the subject of severe cost reduction.

Being tough for businesses, this however presents a unique opportunity for logistics providers to develop their offerings. It also means seeking innovative business models that will bring the most competitive advantage. One possible example of such innovation is a shift from traditional operational models, where specific modules in the supply chain such as warehousing and freight are independently offered, to provide holistic logistics solutions to customers. The importance of this aspect is described by (Osterwalder, et al., 2014) in his value proposition and value creation approach, as follows:

“Your customers are the judge, jury, and executioner of your value proposition. They will be merciless if you don’t find fit!”. Osterwalder, et al.(2014).

Arguably, these holistic logistics offerings should be developed not only to meet customer needs but also, from an insider’s perspective, should be built as a single product.

1.1 Business Context

The case company of this thesis is a 3rd party logistics provider. The core business of the case company, was previously in a different area unrelated to logistics. For a long time, the core business was predominantly its main revenue contributor as the company operated in a monopoly environment. However, in the last decade, the core business has faced a huge decline due to digitisation and changes in end-customer preferences. The decline trend of this business has made the case company to give increased focus to one of its other business areas, provision of logistics services as a 3rd party provider. 3rd party logistics providers (3PL) are companies who provide part or all of logistics functions in a supply chain to their customers. The case company also offers 3PL services as part of its service portfolio, which include three main services. These are freight and

transportation services, parcel or ecommerce solutions and warehousing services. These services are in essence owned and managed by three different units.

Previously, the strategy has been to attain revenue growth by selling the three different services in their own pipelines. In search of growth areas, the company has established a new service, Supply Chain Solutions (SCS) which is a new offering combining the three different services. The new service is based on the idea of all three business units working together, contributing within their own expertise to one and the same end in terms of customer service. Eventually, the aim of the case company is to become a one stop logistics shop for both existing and new B2B customers.

1.2 Business Challenge, Objective and Outcome

Currently, delivery of this service involves three business units, freight, parcel and warehousing. These units, however, operate more or less independently, as independent silos, with their own key performance indicators (KPIs) and service level agreements (SLAs).

Within the new service, the target is that all three business units would have common understanding of what the value proposition given to the customer is, and how their aligned operations affect quality. This in effect means understanding, as critical stakeholders, their roles and responsibilities in this new set-up. Additionally, the business units need to have an understanding of how current business unit specific Key Performance Indicators (KPIs) affect the customer promise of a customer who has bought the SCS service.

Presently, the three business units have their own KPIs but ideally the goal is that each business unit would view and develop common processes, within the new service framework. Although the overall customer value proposition for the SCS service is crystallized, it remains internally unclear for the three business units providing the SCS service. This issue poses a challenge as there is some change resistance in the three business units to seamlessly working together towards a common goal.

Accordingly, the objective of this thesis is to *propose an approach in terms of roles, responsibilities and key performance indicators, which would align the stakeholders from the three units to operate toward the common service goal.*

The outcome of this thesis is a new *approach focused on the alignment of roles, responsibilities and KPI's* for the three key stakeholder business units in delivery of the SCS service.

The analysis in this study includes only those customers who have bought the whole scope of SCS service with operations in Finland. Customers who buy just part of the SCS service are left out of this study. This is because the aim of the study is to build a proposal that would align all key stakeholders, and the assumption is that the final outcome will be applicable to the partial service as well.

1.3 Thesis Outline

This study is conducted by identifying and analysing the existing operations framework for delivering value to B2B customers who buy a holistic SCS service within the case company. This analysis is done separately for the three business units. For creating the new aligned approach, the existing operations framework is revised based on the results of the current state analysis, best practice from literature, and internal input from key stakeholders. The new approach is developed with the main emphasis on aligning the existing roles and responsibilities and the KPIs, with the aim of truly and effectively support the customer value proposition in the new SCS service.

The study is written in seven sections. Section 1 is the Introduction. Section 2 presents the research design, data collection and analysis methods used in the study. Section 3 contains the results of the current state analysis. Section 4 discusses existing literature and produces a conceptual framework for aligning roles and responsibilities and developing KPIs for the case company. Section 5 presents the initial proposal for the developed using results of current state analysis and the existing literature. Section 6 discusses the results of the proposal validation and introduces additions to the initial proposal. Finally, section 7 contains the executive summary and evaluation of the Thesis.

2 Method and Material

This section describes the research methods used for this Thesis and the reasons for why the approach is selected. Additionally, the research design, data collection methods and evaluation criteria used in this study are discussed.

2.1 Research Approach

Management research uses multiple research approaches, but often the most popular approaches are either case study or action research, with some variations. In this thesis, the case study approach is selected for conducting this study. According to Yin (2009), defines the case study approach as follows:

“A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between the phenomenon and the context are not clearly evident”. Yin (2009; 18)

The case study approach aims to find solutions for practical problems facing an organization. Näslund, et al. (2010; 331). To answer the research question, the case study is conducted systematically and collaboratively, and it also sets the researcher in a fundamental role in which he is actively involved in refining the organizational problem.

Typically, three research strategies are used with the case study approach, which are quantitative, qualitative or mixed research. According to Williams (2007; 67-68), *qualitative research* provides insight from relevant stakeholders based on their opinions on where the problem lies. Baxter & Jack (2008) define a qualitative case study as follows:

“Qualitative case study is an approach to research that facilitates exploration of a phenomenon within its context using a variety of data sources. This ensures that the issue is not explored through one lens, but rather a variety of lenses which allows for multiple facets of the phenomenon to be revealed and understood.” Baxter & Jack (2008; 544)

Another important feature of the case study is building of a research design and following it in the course of the case study. Yin (2009) defines research design as follows:

“A research design is the logic that links the data to be collected (and the conclusions to be drawn) to the initial questions of a study.” Yin (2009; 24)

In addition, Yin (2009) also, states that the case study approach combines both detailed analyzes of the case and syntheses of literature that provide a foundation for theory used to develop the solution. Qualitative data can be gathered from interviews, observations and analysis of an organization’s documents. On the other hand, *quantitative research* is more structured and uses numerical data to quantify the problem by providing facts by use of trends. *Mixed research* is a strategy that combines both qualitative and quantitative strategies, with either taking an equal share of the research approach or one being secondary and the other primary.

In this thesis, the case study approach is selected for conducting research since it fits the logic of the investigation and the approach to the case taken by the researcher. In this thesis, the qualitative strategy for conducting the case study is used. The data collection is discussed in more detail below, preceded by the description of how the research design of this study is built.

2.2 Research Design

The research design of this study is split into five stages. The stages include, first, the formulation of the business challenge which drives the objective of the research; second, the current state analysis and the review of existing literature. These stages are followed by building the proposal and, finally, validating the proposal and presenting the final solution. These stages are illustrated in 0 below.

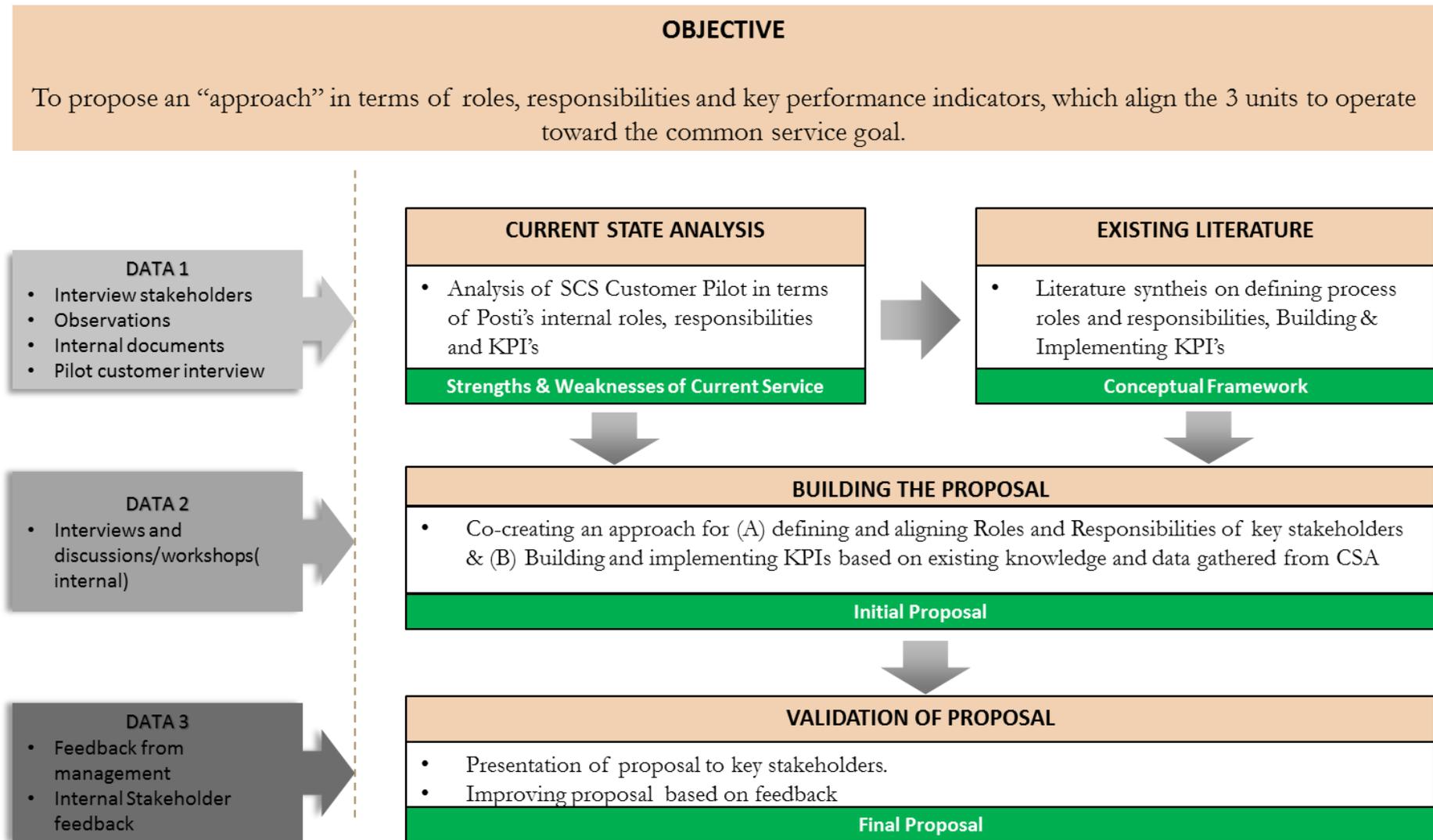


Figure 1. Research design in this study.

As seen from 0, the research design contains five stages, with the content of each step specified in the white boxes and the outcome in the green boxes. The first step of research design defines the objective of the thesis. The goal setting is done iteratively, and it is fine-tuned during discussions and workshops with the management of the company. The management of the company identifies this problem as having a significant impact the success of the new SCS offering.

The second stage of this research is to make the current state analysis of the present SCS offering. This stage involves creating a process map identifying the development, implementation and production of the SCS offering for the customer pilot. In this step, the researcher interviews specialists who participated in the latter process steps. These interviewees include process specialists from the three business units, production, sales, customer implementation and ICT. The outcome of the current state analysis is to identify strengths and weaknesses in the organization in the development, implementation and production of the SCS offering for the customer pilot in the context of fulfilment metrics, roles and responsibilities.

The third stage involves studying literature concerning (A) defining process roles and responsibilities and (B) building & Implementing KPI's in the context of an organization offering a service delivered by multiple business units. The purpose of this stage is to synthesise literature that is relevant to solving the issues identified from the current state analysis. As a result, a conceptual framework is developed with best practice content specific for this research.

In the fourth stage, a proposal is developed iteratively, in workshops, with the same participants involved in the current state analysis. The proposal is developed using the data from the current state analysis and the conceptual framework from literature. In this stage, input from the stakeholders and ideas generated from the workshops is evaluated and implemented to further develop the outcome of the research.

Finally, in the last stage, the final CVP model is presented to management for validation and feedback. Based on the received feedback improvements to the proposal is done.

The design of this study aims at developing a solution that solves the problem of the company by combining the results from the analysis of the SCS service cases with specific and relevant literature theories to develop a proposal.

2.3 Data Collection and Analysis

Data for this study was collected mainly from interviews, review of internal documents and workshops. The data is split into three categories: Data 1, Data 2 and Data 3, which correspond to the stages of the research design as seen in Section 2.2 above. Data collection 1A, which was done during the current state analysis, is shown in 0 below.

Table 1. Details on Data Collection 1A (interviews on the customer pilot).

	Participants & Roles	Data Type	Date and length	Documented as
1	Respondent 1: Service Management Technical Solution Manager	face to face Interview	Jan 2017, 2 hours	Field notes
2	Respondent 2: Sales Manager	face to face Interview	Jan 2017, 2 hours	Field notes
3	Respondent 3: Process Manager, production	face to face Interview	Jan 2017, 2 hours	Field notes
4	Respondent 4: Head of Supply Chain Outsourcing & Customer Implementation	face to face Interview	Jan 2017, 2 hours	Field notes
5	Respondent 5: Technical Key Account Manager; ICT solutions	face to face Interview	Jan 2017, 2 hours	Field notes
6	Respondent 6: Service Manager; ware- housing	face to face Interview	Jan 2017, 2 hours	Field notes
7	Respondent 7: Project Manager	face to face Interview	Feb 2017, 2 hours	Field notes
8	Respondent 8: Pilot Customer	face to face Interview	Feb 2017, 2 hours	Field notes

As seen from 0, Data collection 1A mainly relied on interviews and discussions as data sources. The participants were selected to represent the knowledgeable and experienced experts that were involved with the customer pilot in various roles. These participants provide insight that is critical in defining the case from the perspective of

their areas of specialization. Taken together, data collected gave a holistic view into the pieces that come together to provide the SCS service for the customer pilot. In preparation for the interviews, the researcher provided information about the objective of the study and a high-level overview of the case to the participants beforehand. During the interview, the researcher used a predefined set of questions, which guided the interview with the participants. The results of the interview were documented as field notes and further analyzed using Thematic content analysis to identify the strengths and weaknesses from the pilot case.

In addition to the interview and discussions, this study also relied on the internal documentation as source of data collection for the current state analysis. These documents are shown in 0 below.

Table2. Details on Data Collection 1B: Document analysis for customer pilot.

	Name of Document	Pages	Description
DATA 1B			
9	Pilot Customer RFQ (Request For Proposal)	8	Customer's requirements for new service
10	Case Company Service Description for pilot customer	15	Case company's description of service according to customer

As seen from 0, Data collection 1 also relied on internal documentation as its data source. The researcher reviewed RFQ documents (Request For Proposal) from the pilot customer. The RFQ document describes the initial customer service requirements for the service the customer wanted provided by the case company. Additionally, the researcher reviewed the service description of the case company that was provided to the pilot customer. These two documents give a clear insight into how the case company organized itself to meet the requirements of the pilot customer. All textual documents in this study were analyzed using the thematic content analysis.

In Data collections 2 and 3, similar logic was used for collecting data for proposal building. The content of the data collection in these stages is shown in Table 3 below.

Table 3. Details on Data Collection 2 & 3: Workshop sessions for building initial proposal and validation of proposal.

	Participants & Roles	Data Type	Topic, description	Date and length	Documented as
DATA 2					
9	Selected respondents from Data 1 collection stage	Theme Workshops	Proposal building	March 2017	Field notes
DATA 3					
10	Management	Group interview	Validation		Field notes and recording

As seen in Table 3 above, in Data collection 2, the study involved the experts involved previously in the interviews during the current state analysis as well as the process experts from the three main business units. Development of the initial solution was done in a workshop forum, where findings of the current state analysis and a conceptual framework from literature was presented for discussion and review. Comments and improvement suggestions from the participants were documented as field notes. The study used the feedback from this workshops to further develop the initial solution.

In Data collection 3, as also seen above, the refined solution was presented to the management for feedback. Feedback was documented as field notes and suggestions were either taken to improve the final solution or noted as issues of further development that fall outside the scope of this study.

2.4 Thesis Evaluation (Plan)

For evaluating the results of the thesis and its research process, various research quality criteria can be used. Among others, the following criteria are typically utilized: reliability, validity, relevance and logic of the research, with reliability and validity making the most popular evaluation criteria.

Reliability as defined by Yin (2009; 45) is the ability of a study to illustrate that the same findings will be achieved if a different individual replicates similar research approaches and strategies. Quinton & Smallbone (2006; 129) state that the researcher needs to give clear and supportive arguments for the selection of their methods for

data collection and data sources. The process of using different data collection methods and sources to get different viewpoints is known as triangulation. Triangulation improves the accuracy of data and consistency of findings as opposed to using a single data source. Quinton & Smallbone (2006; 131)

Validity is defined by Quinton & Smallbone (2006; 126) as the characteristic of a research not only to be transparent and rigorous in its approach but also understandable and clear for the reader. Validity is divided into external and internal validity. Internal validity is the aspect of a research to measure what was intended for measurement. External validity means how comprehensively the results of the research can be applied to other contexts. Quinton & Smallbone (2006; 127-129). In qualitative research approach, internal validity is particularly enhanced by the large amounts of data analyzed to elaborate the subject of the study Quinton & Smallbone (2006; 128).

In addition to validity and reliability, this study was evaluated, also according to *relevance* and *logic*. Thorne (1997: 117-132) suggests the following as questions as the tests for evaluating *relevance* of a study: (1) Are there convincing claims about why this knowledge is needed? (2) Is the knowledge appropriate to the development of the solution? (3) Does the study produce pragmatic findings and results? and (5) Is there evidence of ambiguity and creation of meaning?

Finally, *logic*, is defined by Cambridge (2017) as “a formal scientific method of examining or thinking about ideas”. Logic is the ability of a research to make easily understood and justifiable arguments for the choices selected, findings and solutions developed during the research. In other words, by ensuring validity, reliability and relevance of the study, logic can be established. Blichfeldt & Anderson (2006; 5) argue that the quality of research can be additionally improved by properly - or in other words, logically - defining the intellectual framework intended for developing the research’s outcome, and aligning this to the general findings of the case being analyzed (which means improving the relevance criterion).

Equally important, rigorousness can be ensured in a study, to be able to adequately answer the relevant research questions. Blichfeldt & Anderson (2006; 2-4).

Table 4. Thesis evaluation matrix.

	BUSINESS CHALLENGE, OBJECTIVE, OUTCOME	RESEARCH DESIGN	CURRENT STATE ANALYSIS	CONCEPTUAL FRAMEWORK	DEVELOPING SOLUTION	PRACTICAL VALIDATION
RELEVANCE	Is the thesis addressing a relevant business challenge	Does the research design include relevant stages to be able to reach objective	Are the findings of the current state analysis relevant	Is the literature selected to construct the conceptual framework relevant	Is the developed solution relevant to the case company Does the solution have relevance in other settings inside the case company or outside of it	Is the solution validated in a relevant practical context
LOGIC	<p>Are findings, solutions and interpretations easily understood by others?</p> <p>Are the choices made throughout the project grounded with arguments?</p> <p>Have logical adjustments been made to the initial research design if/when needed during the project?</p> <p>Is each stage of the project internally logical in terms of making sense and constructed around a "previous" leading to the "next" approach?</p>					
	<p>Does the outcome of the research and development project meet its objective</p> <p>Is the scoping of the research and development project logical</p> <p>Is the research-developer enough of an insider concerning the business challenge on hand to be able to tackle it</p> <p>Does the objective drive all stages of the project (current state analysis, conceptual frame, solution development and validation)</p>	<p>Is there an overall match between the research design, objective and outcome</p>	<p>Do current state analysis findings drive literature search and solution development</p> <p>Have the "right" informants been selected</p> <p>Have the "right" data collection methods been selected</p> <p>Have the "right" data-analysis methods been selected</p>	<p>Does the conceptual frame help in developing a solution</p>	<p>Have the "right" informants been selected</p> <p>Have the "right" data collection methods been selected</p> <p>Have the "right" data-analysis methods been selected</p>	<p>Does the validation approach match the proposed solution</p> <p>Have the "right" informants been selected</p> <p>Have the "right" data collection methods been selected</p> <p>Have the "right" data-analysis methods been selected</p>

VALIDITY	Is there a "proof of an evidence trail" throughout the project					
			<p>Are findings and interpretations based on enough data (saturation)</p> <p>Have sufficient stakeholder perspectives been considered (triangulation)</p>	<p>Have alternative literature perspectives been considered (triangulation)</p> <p>Have sufficient literature perspectives been considered (saturation)</p>	<p>Are findings, solutions and interpretations based on enough data (saturation)</p> <p>Have sufficient stakeholder perspectives been considered (triangulation)</p>	<p>Is the solution validated in a relevant practical context</p> <p>Are findings, solutions and interpretations based on enough data (saturation)</p> <p>Have sufficient stakeholder perspectives been considered (triangulation)</p>
RELIABILITY	<p>Are findings, solutions and interpretations linked to data</p> <p>Are findings, solutions and interpretations available and documented diligently</p> <p>Is documentation transparent enough to enable others to repeat the project</p> <p>Would similar (but not necessarily exactly the same) findings, solutions and interpretations be reached by others</p> <p>Has the researcher/developer been able, despite his insider status, to carry out the project in an objective way</p>					

0 above shows the various criteria used to evaluate this study in every phase of the research process. The results of these evaluation criteria after applying them to ensure the quality of the research process and outcomes are finally evaluated in Section 7.4.

3 Current State Analysis

This section discusses the current state of the CVP of the case company in terms of roles, responsibilities and KPIs for the SCS (Supply Chain Solutions) service.

3.1 Overview of the Current State Analysis Stage

As discussed in Section 1.2, the challenge for the case company is how to efficiently organize and align the three business units to provide a common service goal. To address this challenge, the current state analysis (CSA) was done by analyzing an SCS pilot customer in the context of organizational structure, roles and responsibilities, and fulfillment metrics in the case company. In CSA, data collected in Data 1 collection was provided by experts in various roles in supply chain management, logistics and service delivery.

The analysis below, first, focuses on the background of the organizational structure of the case company, from the perspective of the SCS service, and the description of the SCS service as it has been initially designed. This overview and analysis of the organizational structure of the case company is discussed in relation to the participants' contribution and roles in delivery of the SCS service for the pilot customer.

Second, the analysis concentrates on the stakeholder involvement for the pilot customer. The data is analyzed and described on the example of the SCS service for the pilot. The analysis covers the SCS service steps which start from the initial phase (RFQ: Request for Quotation) through implementation phase to production phase. These phases are further analyzed, alongside stakeholder involvement map, throughout the process of delivery of the SCS service. The purpose was to build an understanding of the customer requirements in relation to *how* the case company organized itself to be able to provide the SCS service.

Next, Key Performance Indicators in for the pilot are discussed in the context of the following themes: a) how were KPIs designed and implemented? b) Strengths and weaknesses of the current SCS service KPI. The analysis for the KPIs is quantitative and does not entail deep dive analysis into the performance of KPIs.

Finally, the summary of strengths and weaknesses of the SCS service pilot is discussed and will be the key findings will be the focus of the next sections of the thesis.

3.2 Background of the Organizational Structure and Initial SCS Service

The case company designed the SCS service to expand its product portfolio and increase revenue growth following a decline in its previous core business. The new service was designed to enable collaboration between the individual logistics competences the company already established. These individual logistics competences are warehousing, freight and parcel services. The new SCS service is described in detail in Section 3.2.2

3.2.1 Case Company Organisation Structure

CONFIDENTIAL

3.2.2 Description of the Initial SCS Service

CONFIDENTIAL

3.3 Pilot SCS Service

CONFIDENTIAL

3.4 Analysis of the Pilot SCS Service

For this study, the current state analysis of the pilot was conducted in January and February 2016. The analysis was done using data collected from key internal stakeholders and customer interviews as well as company documentation regarding the customer requirements and service descriptions by the case company. The details of these key internal stakeholders are discussed in Section **Error! Reference source not found..** The analysis of the pilot customer was done in two parts shown in Table 5 below

Table 5. Current state analysis phases.

Analysis Item	Content of Analysis	Details of Analysis
Analysis A	Participant roles and responsibilities	<ul style="list-style-type: none"> Customer Requirements analysis Case company's capabilities analysis Roles & Responsibilities of participants throughout the process including delivery of the service
Analysis B	Fulfillment Metrics	<ul style="list-style-type: none"> Key Performance Indicators for the SCS service

As seen in Table 5 above, the current state analysis was done for two areas, described as analysis A and B, in relation to the SCS pilot. The SCS pilot process is divided into 5 parts, which are described in detail in section 3.2.2. Analysis A was done for the SCS pilot with an aim of identifying the participant roles and responsibilities in the whole process of implementing the customer and into production. In this phase, the pilot customer's web shop is running and the case company has implemented the service as required by the customer. Secondly, analysis B was done with an aim of identifying how fulfilment metrics were designed and implemented in relation to the customer's requirements and the combined participation of the three business units to provide one service.

As for the participants in the current state analysis, the interviewees in the current state analysis were done with Sales, Business, Process experts from the three business units, ICT experts and the pilot customer. Sales is responsible for coordinating the collection of data from production and business for pricing the services according to the customer requirements. In this case the requirements as described in the RFQ. Business is responsible for coordinating the scope and development of services according to the pilot customer's requirements. Process experts are responsible for designing and implementing the production processes for the pilot customer's service as defined by business. ICT is responsible for all designing and implementing system configurations, integrations and implementations between the case company's production and the pilot customer. Warehouse, Freight & Parcel Production is responsible for actual delivery of the service sold to the customer.

3.4.1 Analysis of Roles and Responsibilities

The analysis of participant roles and responsibilities was done considering two dimensions of the pilot customer. The first is the *customer implementation process*, discussed in this section and the second is the *service management service* described in section 3.3. The interview questions were divided into the following themes:

- a) participant involvement in the process (role, responsibilities and time when participant was involved)
- b) information sharing and information available during the process
- c) strengths and weaknesses
- d) Other issues not covered in the previous elements.

The customer implementation process took lasted about 6 months as shown in Figure 5 below.

As seen in 0 below, the process began when contact was initiated by the customer through the Request For Quotation (RFQ) Process. The RFQ was a document stating what the customer wanted and asking multiple logistics service providers to describe how their capabilities meet the requirements of the customer. The case company was selected as the logistics provider for the pilot customer's new online store after the RFQ process.

The case company set up a project, which lasted about 6 months, as described in 0 below, included building and implementing the service for the customer. Service building was designing the end-to-end process based on the customer's requirements. The end-to-end process refers to the cycle of a customer / consumer order from the time an order is placed to delivery.

Additionally, the service building involved the configuration and integration of warehouse and transport management systems to support the designed processes. Afterwards, came the implementation phase where processes were trained to production personnel and systems were tested in a production environment. Finally, the project was closed with stabilization of production. At this point, the pilot customer had opened the web shop to a limited number of customers and actual customer orders were being handled and delivered by the case company. During this phase, the case company closely monitored the process and systems to ensure deviations were corrected. After, stabilization of production the pilot customer rolled out the web shop to all its customers.



Figure 6. Customer implementation process of the pilot.

During the customer implementation process, a project team consisting of specialists in the various service parts (business units) is put together. As stated in Section 3.3, the analysis of this process is done with an aim of understanding the roles and responsibilities of the key stakeholders with the customer pilot. During the interviews, participants describe their involvement in the customer process, how their roles were defined and how they evolved during the process. Additionally, participants describe what information was available to them to fulfil their roles. Figure 6 below shows a summary of participant involvement based on the interviews conducted during the current state analysis.

As seen from 0 below, the length of the bars, indicate the amount of involvement by each participant under each phase. The longer the bar, the more the involvement. Only sales, business and warehouse process experts are involved with the RFQ process. Business represented both freight and parcel business units. Warehouse process experts were involved throughout the customer implementation process. Process experts from Freight and Parcel business units were taken actively on board when the customer implementation project started. Customer service was partly involved in the customer implementation and took a more active role close to stabilization of production. ICT was involved after the RFQ stage throughout to production. Production from the three business units was involved just before the customer implementation phase was closed.

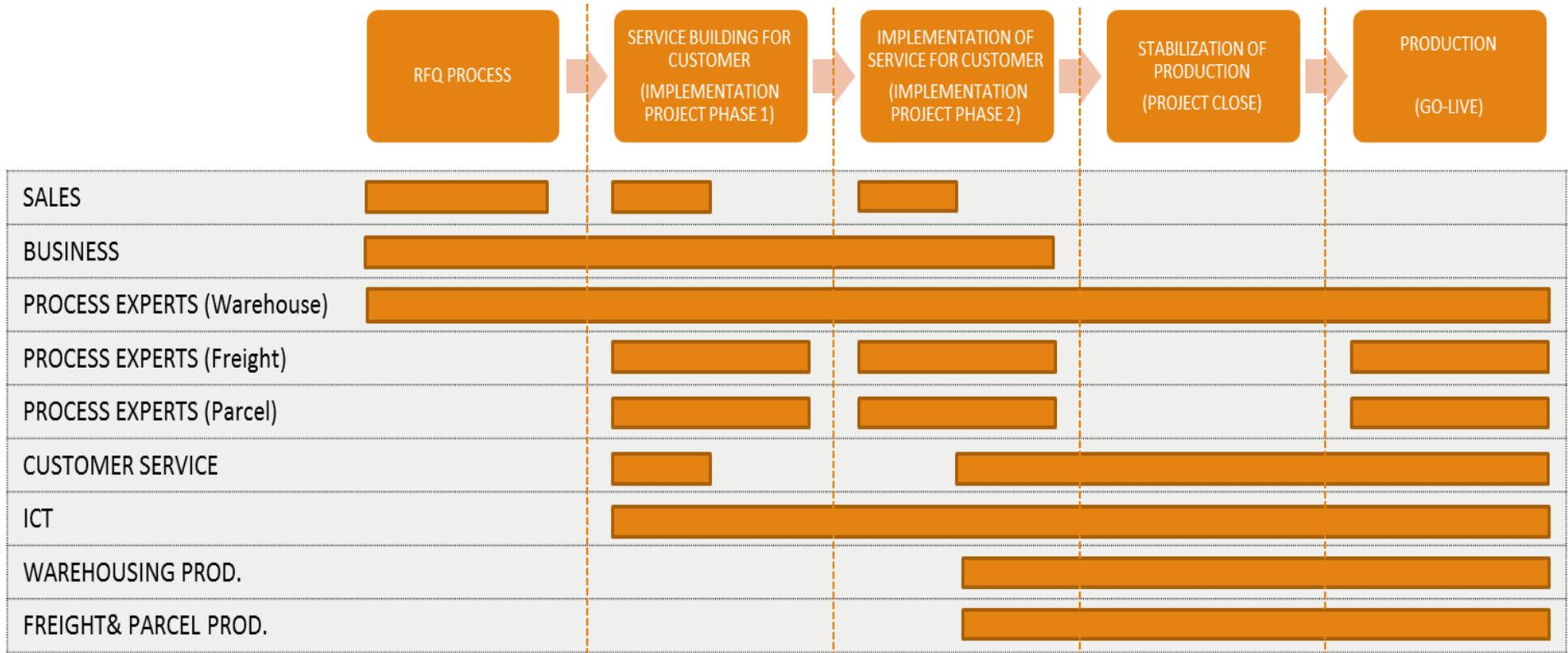


Figure 7. Stakeholder participation map for the pilot.

3.4.2 Findings from CSA, from the Roles and Responsibilities Perspective

From the results of the interviews, the key issues identified are divided into two themes. These are (a) *Information sharing* for comprehensive execution of the roles with the information available (b) involvement of the *correct participants* throughout the whole process, and service. The analysis starts with the first theme(a).

First, as for *the Information sharing*, there are two aspects to this. These are (a) information from different stakeholders regarding for example process and system development, mostly passed by human contact (b) information from the various systems used by the individual business units. Information sharing was considered as information required for the execution of participant roles. Based on the data collected from the interviews regarding information; interviewees stipulated that information was either not communicated timely and accurately or it was not always handled in the context of provision of a holistic SCS service.

Although the case company has done a “good job” to cover the silos in providing the SCS service as a holistic service for the customer, the pilot customer stated the following during the interview

“Although the process designed for our service has worked, the expectation level was not always met as operational silos were at times visible in the conflict of information received from the case company.”

Data 1: Customer Interview

The customer implementation phase discussed in 0, was headed by a project lead from the SCS business unit whose main field of business is warehousing. The project lead met with the customer frequently and discussed issues regarding the status of various parts of the service building and implementation. Accordingly, development issues regarding transportation customer needs were communicated to the process experts, particularly in transportation, based on the information the project lead had. Thus, due to this chain of communication, a common understanding of issues affecting the whole service was not always built. For instance, a change considered to be of small impact to the warehousing process might have had significant impact to the transportation process. Additionally, the case company’s way of working, in part, limits the distribution of information to internal employees regarding customers. Only employees who have signed a

non-disclosure-agreement (NDA) have access to all information regarding the customer contract and service. This issue contributed, in part, to the deficiency of information the relevant stakeholders needed to carry out their roles.

“If we had a full picture of the service sold and the rationale behind the customer’s requirements, we would have been more effective in planning the process and consequently production would have been more prepared for different scenarios”

Data 1: Process Expert Interview

For example, after the launch of the customer’s online shop to B2C customers, the customer gave a forecast of expected volumes a few months before the peak season in December. This forecast information was communicated to sales and business who in turn communicated to warehousing production. The relevant adjustments to the process and resource needs were done per customer volume forecasts by warehouse production. When transportation got this information, a critical process problem was brought forward. The case company’s parcel production did not have the facilities, capacity nor capability to handle such volumes. In addition, there was limited time to evaluate options to develop a solution.

Secondly, the involvement of the *correct participants* throughout the whole process, and service was analyzed. During the service building phases, two important stakeholders were “left out” and given a more passive role. These were production from all the business units and customer service as seen in 0.

“Production, the level at which the actual process takes place, is not involved at any step of the customer implementation process and data and information from process experts is used to design the process.”

Data 1: Process Expert Interview

The statement above was in regards to some aspects of the SCS service which were designed without consultations with production. Efficiency calculations were simulated based on given numbers though the reality on the floor level was different. Customer service was critical to the process as the key contact point between the customer and the case company as seen in **Error! Reference source not found.** Customer service played an important role in the service management aspect of the service sold to the

pilot customer. Perhaps, it was not clearly articulated what the importance of the service management service to the pilot customer in the fact that it differed in great extent to the normal customer service accorded to other customers. As such, customer service should have been involved earlier in the design of the service to get an understanding of the complete picture.

During the service building and implementation phases, there was multiple change of personnel especially in ICT. ICT solution manager was the case company's interface between the pilot customer's ICT department and the case company's system providers. One key issue was that the alignment of business in regards to IT development, according to production and customer requirements, was perceived to be "non-existent" by the solution manager. The solution manager's role was to bridge the gap between the business and customer in terms of IT needs. An example of this is that the business and process experts had designed the process such that particular orders would be given priority for picking, packing and dispatch in the warehouse. This prioritization also determined transportation method and scheduling that was designed according to the customer order type. Later, it was found out that this was not possible as the warehouse management system did not have a feature that allowed prioritisation of orders for the pilot customer per the designed process. In part, the change of personnel where information transfer was not adequate to enable the new manager to adapt quick enough and get on board with the project, played a key role in this issue. Additionally, such critical process designs should have been informed to IT to be included in system specifications.

As a result, during implementation and production phases, the customer felt that the case company did not assert its vast wealth of knowledge and competencies in logistics by providing more innovative solutions.

"It seemed that virtually everything we tabled was analyzed and implemented by the case company as we rarely received innovative solutions from the case company who is a logistics expert".

Data 1: Customer Interview

The customer's perspective on "lack of innovativeness", was because the participants in the implementation of the pilot customer did not always get the right information at the right time and in the right context. This created a challenge where participants' roles were

more passive than proactive in the sense that the development was done only according to customer requirements and not in view of the big picture, the SCS service.

The SCS service requires that information flows through the supply chain and that all participants get the right information to be able to execute their roles. From the analysis, the challenge of information flow was a typical example of this found out from the interviews. For instance, the status of a customer order in warehouse or transportation is not available for the case company's customer service and consequently not available for the pilot customer's customer service. The pilot customer's customer service department has therefore directly contacted the case company's production to find out the status of customer's orders. Additionally, without information on late customer orders, transportation has not been able to dynamically plan and schedule deliveries so that the customer promise is met. As discussed in section 3.3, this was a key aspect of the customer's requirement concerning service management. The service management aspect of the whole service was quite critical for the customer. For this to be successful, it required transparency and consistent information sharing between the three business units in delivery of the service.

3.4.3 Analysis of Key Performance Indicators

This section describes how Key Performance Indicators(KPIs) were designed and implemented for the customer. There were two types of KPIs designed for the pilot customer as shown in 0 below. These are business unit specific KPIs and E2E(end-to-end) KPIs. Business unit specific KPIs are marked with the green boxes and measure a specific part of the process within a business unit. E2E KPIs are marked with the red boxes below. These KPIs are cross-business unit and measure the performance of the case company's delivery process as per the customer promise.

CONFIDENTIAL

Figure 8. Description of KPIs by for the pilot customer.

As seen in 0 above, in the warehouse process, the process steps of a customer order are numbered in sequence, with numbers 1,2,3 representing the business units and the decimals representing the process step. The E2E KPIs were designed *based on the customer requirements* which were based on the type of orders. There were two types of orders which either went through the parcel delivery channel or the freight delivery channel. The expected delivery date was shown in every order and came directly from the customer when the orders were transferred to the case company's warehouse management system. A detailed description of the KPIs is shown in Table 6 below.

Table 6. KPI descriptions for the pilot customer.

CONFIDENTIAL			
BUSINESS UNIT KPIs			
1.1			
1.2			
2.1			
3.1			
E2E KPIs			
4.1			
4.2			

The E2E KPIs were previously non-existent as compared to Business Unit KPIs which were part of the company's daily operational processes. The pilot customer requested that the case company develop this KPIs as for the performance of the holistic SCS service and not just the individual elements of the process.

3.4.4 Findings from CSA, from the Key Performance Indicators Perspective

The business unit specific KPIs have been part of the case company's daily operations. Accordingly, during the CSA, these KPIs were found to be functional and solid in their definition, criteria for measurement and ownership. The main challenge was with the E2E KPIs where the customer agreement was made with a view of the holistic service.

“The main challenge is when responsibilities and KPIs are put together according to customer expectation but everyone is still looking at operations from their own point of view.”

Data 1: Customer Interview

As discussed in Section 3.4.4, the first critical task was for the warehouse to be able to prioritize picking according to the customer promise. Traditionally Parcel business unit calculates the delivery date, upon first reception of order (from the warehouse in this case) based on the postal code to where the order should be delivered. Accordingly, the greater the proximity of the recipient from the parcel sorting centre, the longer the order takes to deliver and vice versa. Freight on the other hand operates based on predetermined schedules. In addition to the prioritization of orders, transportation schedules particularly needed to be taken into consideration.

When the orders were picked and packed, ready for dispatch from the warehouse, warehouse personnel “completed” their task and handed over the order to transportation (Parcel & Freight). There was no pre-information to Transportation regarding the orders and their statuses. Thus, if orders were late, this information was known in the warehouse but never got to transportation. Additionally, transportation continued delivering orders according to the traditional service levels where deliveries were done based on schedules and calculated delivery dates. Consequently, this resulted in a situation where the customer promise was not always met.

When there was a problem with the order, it was unclear whose responsibility it was when the customer promise was not met. The warehouse became the main interface of communication when exceptions happened between the case company and the customer.

3.5 Summary of Current State Analysis (Data Collection 1)

This sub-section provides an overview of the main weaknesses identified in Section 3. The case company has an already existing and well defined customer value proposition. From the CSA, the inputs towards the delivering the customer value proposition are the key challenges. The issues identified from the CSA are summarized below.

- Poor resource allocation and personnel involvement during the different phases of designing and implementing the SCS service.
- Ineffective Communication between stakeholders.
- Collaboration challenges between the three business units.
- Unclear SCS KPIs as the three business units still follow “silod” KPIs
- Lack of clear KPI ownership in the SCS service

Accordingly, in the next section, best practice from literature with a focus on the issues above, will be synthesized to develop a proposal for the case company.

4 Existing Knowledge on Improving Roles & Responsibilities and Developing KPIs

This section is divided into three main sections which cover the best practices based on available literature on how to enhance a company's value proposition through definition of roles and responsibilities and KPIs. The first section discusses customer value proposition. This section provides an overview of customer value proposition definition and the elements that contribute to it particularly in the context of this study. In the second section, the researcher gives an insight on how to define roles and responsibilities in building and delivering a customer value proposition. The third section discusses how to build organizational KPIs that are aligned with the customer value proposition. The final section builds a conceptual framework from the synthesis for this literature which will be used in building the proposal.

4.1 Customer Value Proposition

Customer Value Proposition is a term that, unlike many others, does not have a generally accepted and specific definition. Anderson, et al. (2006; 1); Rintämäki & Kuusela (2007; 622). However, numerous authors acknowledge that Customer Value Proposition is based on two fundamental principles. First principle is that value is perceived by the customer, and is therefore defined from the customer's perspective. Secondly, Customer Value Proposition plays a key role in a company's strategy and consequently it is organization in terms of delivering an offering that provides value to the customer. Anderson, et al. (2006; 1); Rintämäki & Kuusela (2007). Accordingly, customer value proposition (CVP) is an articulation of how a company's offering will compete by aligning its processes and measures to its strategy with an aim to create value and an experience to its target customers. Hope & Player (2012; 145), Hudadoff (2009; 1). Further, Webster, (1994; 25) defines CVP as follows:

“The verbal statement that matches up the firm's distinctive competencies with the needs and preferences of a carefully defined set of potential customers. It is a communication device that links the people in an organization with its customers, concentrating employee efforts and customer expectations on things that the company does best in a system for delivering superior value. The value proposition creates a shared understanding needed

to form a long-term relationship that meets the goals of both the company and its customers.”

The purpose for the existence of any company is to create an offering that creates value for their customers. Swaim (2010; 15-16), Slater (1997; 164). Osterwalder, et al. (2014) proposes the utilization of the value proposition design model which bridges the gap between companies understanding the needs of their customers and enabling them to describe how these needs will be met by their offering. A properly developed and executed CVP makes significant contribution to a company's value delivery process and consequently it is strategy and performance Anderson, et al. (2006; 7). Additionally, a well-defined, developed and implemented CVP can be a great tool for communication within the company. Mikkola, et al. (2013). Value is not only what customers perceive as benefit from the company's offering but also what customers are willing to pay. Value is created through interaction of a collection of company activities and processes known as a value chain. Porter (1998; 36). The value chain enables a company to identify opportunities to generate customer value. This value is then articulated in the company's CVP. Figure 9 below shows the value chain and value proposition

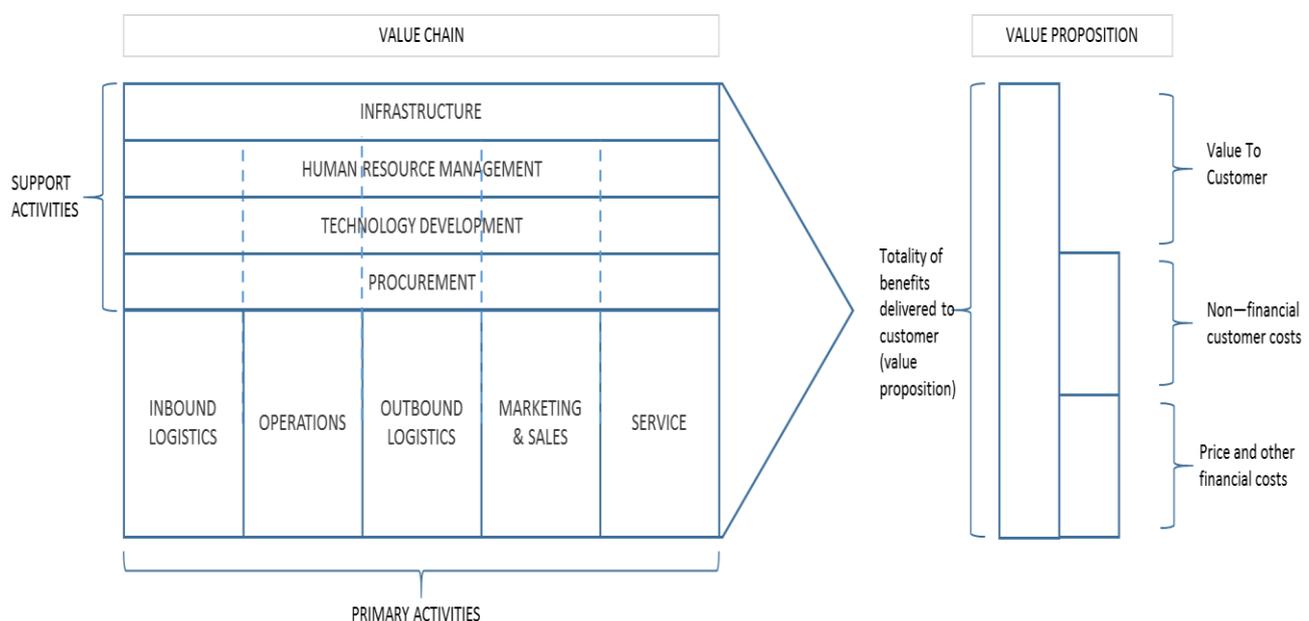


Figure 9. The value chain and Value to Customer as a division of benefits delivered to customer Doligalski (2015), Porter (1998).

The activities in the value chain result in the production of an offering which is the value proposition to the customer. The value chain is divided into five primary and four support

activities as shown in 0. For successful delivery of the company's CVP, a company needs to effectively manage and coordinate the collaboration of stakeholders in both the primary and support activities. Kotler & Keller (2012; 34). The value proposition consists of three elements. These are a) the price paid for the offering b) non-financial costs which include costs related to acquisition and execution of the offering such as time and resources c) added value. The value to the customer can therefore be derived from the total sum excluding financial and non-financial costs. Doligalski (2015; 27). Similarly, Setijono & Dahlgard (2007; 46) reiterate that *“any definition for value must account for the inclusion of total benefits, including direct and indirect benefits derived from attributes and consequences, that arise from partner (seller-buyer) activities and behaviours, less total direct and indirect costs, and be determined from the customer perspective”*

The key to delivering superior value lies how well a company can design, measure and monitor its organization and consequently its value chain. In light of this, Frow & Payne (2011; 233) propose an iterative five-step approach for companies to utilize in building customer value propositions that align to their strategy. The five process steps are (1) Identify stakeholders, (2) Determine core values (common targets), (3) Facilitate dialogue and knowledge sharing, (4) Identify value co-creation opportunities and (5) Co-create CVPs. Knowledge sharing is essentially a part of all the other steps in addition to been a third step. These steps are illustrated in 0 below.

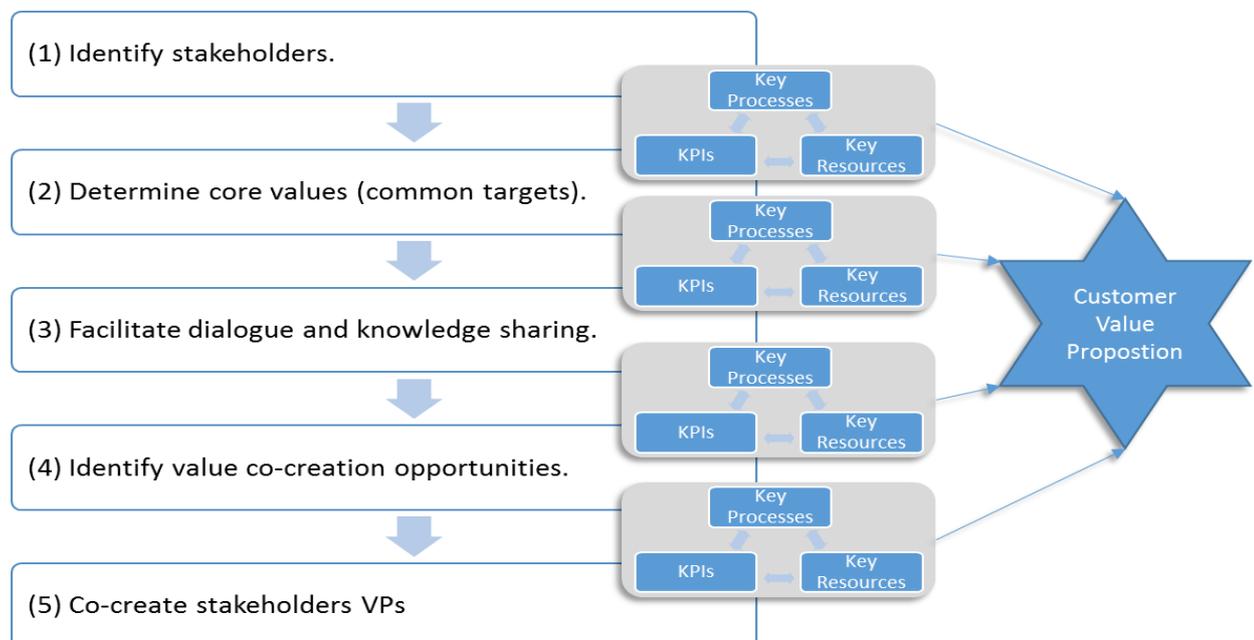


Figure 10. Description of how to align the value chain to CVP. Frow & Payne (2011).

The first step is to identifying all stakeholders within the value chain. This includes understanding their current roles. The second step is determining core values or common targets. This is essential in giving a common goal for working. The third step is developing information sharing procedures and processes and the necessary platforms to enable this. The fourth step is identifying opportunities arising from synergies. Finally, the final step is enabling an environment that enables stakeholders to develop harmonized value propositions. The five steps, which essentially pertain to how define roles and responsibilities in a company's organization, have been discussed in further detail in section 4.2.

The case company in this study has an existing CVP. Accordingly, the focus of this study will be discussing two key elements that enhance the case company's CVP. 1) stakeholder roles and responsibilities in delivering value for the customer 2) Key Performance Indicators (KPIs) that measure the value chain of the case company. These elements will be synthesized to form a conceptual framework which combined with the findings from the current state, will be used to build a proposal for the case company.

4.2 Defining and Aligning Roles and Responsibilities of Stakeholder to Customer Value Proposition

Roles and responsibilities in an organization are characterized and defined through the organizational design. Getting the most out of organizational designs requires intricate collaborative measures and processes within the organization.

4.2.1 Organization Design

In this study, the case company seeks to enhance collaboration by clearly setting the roles and responsibilities of the participants by giving them a common goal under already existing CVP. A critical factor for success in business, is for a company to link their organization to the customer value proposition and to the strategy.

Anderson, et al. (2006; 8) state that companies should be able to map their value propositions to their organizations, business processes and business performance. *"The deliberate process of configuring structures, process, reward systems and people practices and policies to create an effective organization capable of achieving business strategy."* Is known as organizational design. Galbraith, et al. (2002; 1) and Kates & Galbraith

(2007) propose the five star model for organization design which is a framework designed to enable companies build organizations that implement the company strategy as shown in 0 below.

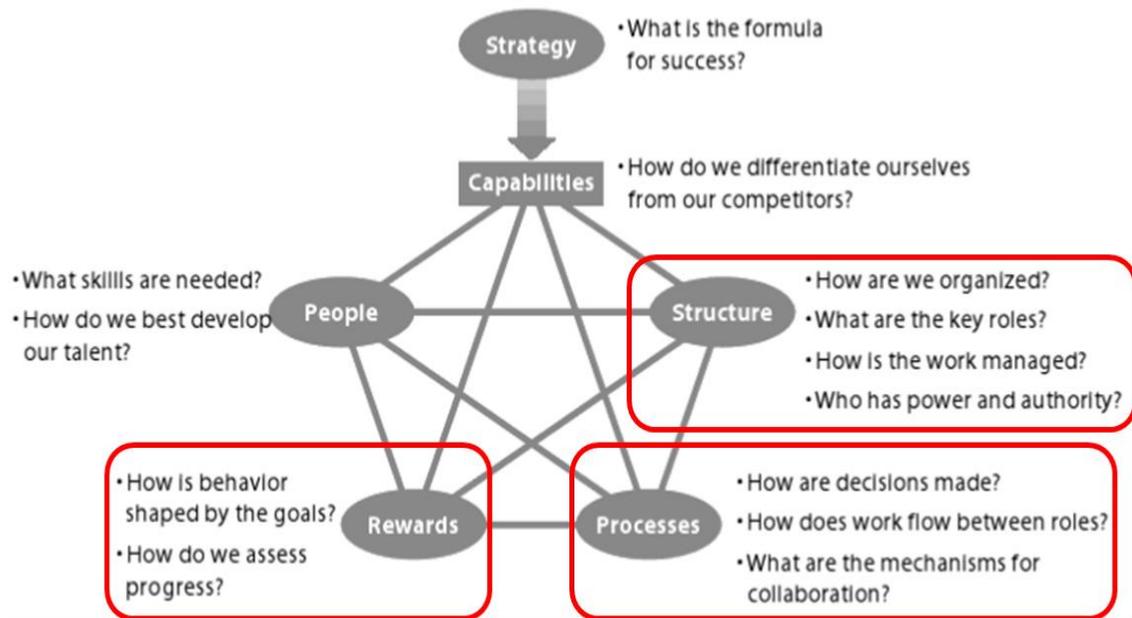


Figure 11. 5 star model for organization design. Kates & Galbraith (2007; 3).

The scope of this study will focus on the three elements (highlighted in red above) in the context of defining roles and responsibilities. Capabilities as discussed in 4.1 are essentially depicted in the company's CVP. Structure dictates where mandate is positioned in an organization and determines reporting and communication hierarchies. Structures are typically built around geographical boundaries, processes and products or a combination of all of these. As structures are created, obstacles in collaboration particularly information sharing and decision making emerge. Subsequently, lateral capabilities in terms of processes and roles need to be in place to effectively manage these obstacles and bridge the gaps between the structures implemented. Reward systems align the company's process performance to the strategic goal. Accordingly, there needs to be a clear set of Key Performance Indicators (KPIs) that track performance (see 0). Galbraith, et al. (2002; 1-4), Kates & Galbraith (2007; 7-24).

According to Kates & Galbraith (2007), companies use two approaches in designing their organizations. These are product-centric approach and customer-centric approach. As market globalization increases and competition continues to stiffen, companies are progressively realizing that competition is not only on the basis of developing superior,

price-friendly products. Customer demand has shifted towards the expectation of overall experience. Hence, companies need to create added value to their offering to maintain a competitive advantage. HSBC (2016). As a result, there is a shift towards developing customer-centric organizations (CCO) from the conventional product-centric organizations(PCO).

“Customer-centric strategies do transform an organization. Put simply, a customer-centric organization brings together and integrates products, services, and experiences from within and beyond the firm to provide solutions to the complex and multifaceted needs of its customers.” Kates & Galbraith (2007; 29)

The differences between these two approaches, according to the five star model discussed in this section are shown in 0 below.

		Product-Centric Company	Customer-Centric Company
STRATEGY	Goal	Best product for customer	Best solution for customer
	Main offering	New products	Personalized packages of products, service, support, education, consulting
	Value creation route	Cutting-edge products, useful features, new applications	Customizing for best total solution
	Most important customer	Most advanced customer	Most profitable, loyal customer
	Priority setting basis	Portfolio of products	Portfolio of customers— customer profitability
	Pricing	Price to market	Price for value, risk
STRUCTURE	Organizational concept	Product profit centers, product reviews, product teams	Customer segments, customer teams, customer profit-and-loss
PROCESSES	Most important process	New product development	Customer relationship management and solutions development
REWARDS	Measures	<ul style="list-style-type: none"> • Number of new products • Percent of revenue from products less than two years old • Market share 	<ul style="list-style-type: none"> • Customer share of most valuable customers • Customer satisfaction • Lifetime value of a customer • Customer retention
PEOPLE	Approach to personnel	Power to people who develop products <ul style="list-style-type: none"> • Highest reward is working on next most challenging product • Manage creative people through challenges with a deadline 	Power to people with in-depth knowledge of customer's business <ul style="list-style-type: none"> • Highest rewards to relationship managers who save the customer's business
	Mental process	Divergent thinking: <i>How many possible uses of this product?</i>	Convergent thinking: <i>What combination of products is best for this customer?</i>
	Sales bias	On the side of the seller in a transaction	On the side of the buyer in a transaction
	Culture	New product culture: open to new ideas, experimentation	Relationship management culture: searching for more customer needs to satisfy

Figure 12. Difference between product-centric and customer-centric organizations. Kates & Galbraith (2007; 31).

As demonstrated in 0 above companies with customer-centric organization have a more solution oriented strategy. The rationale is that mixing and integrating various services to their offerings will result in more value creation for the customer. In regards to the structure, the organization is designed with integrative roles and teams that serve the customer. Another essential point is that these companies focus on customer relationship management where development of the offering is a collaborative process within the organization supported by the availability of data that facilitates decision making. Equally important, the KPIs (named rewards in the Figure 11) are focused on the customer and cascaded downwards to the organization. Finally, the most significant difference with customer-centric companies in regards to people is the reformation of sales by shifting from conventional selling of individual products to selling integrated solutions and dedicated services.

4.2.2 Collaboration in the Organization

When designing new offerings that bring together various business units and stakeholders in the organization, a key factor to success is getting these participants to collaborate mutually and efficiently. As discussed in section 4.1, the value chain consists of various stakeholders in multiple organizations iteratively collaborating and contributing, in their own areas of expertise, to the customer value proposition. Stakeholders are participants in the value chain who have direct impact, or are affected by the company's activities. Bititci, et al. (2004).

Collaboration is when two or more parties work together towards a common goal. When organizations either inside or outside the company collaborate, it is referred to as *inter-organizational collaboration*. Huxham (1996; 1). Although there are numerous benefits that can be achieved through collaboration, often this is not the case. This is due to challenges arising from lack of a common goal, differences in culture and process delivery methods and ultimately lack of accountability. Naturally, organisations that collaborate typically have their own existing goals, which may not necessarily be aligned to those of other partners. Additionally, although each participant's contribution in the collaboration is valuable, the lack of understanding that decisions and activities made in collaboration influence the bigger picture, poses a challenge. Accordingly, in addition to setting a common understanding of the goal, it is important for organizations to build an environment which enables commitment and accountability that aligns the activities of

the collaboration to the big picture, the company strategy. Huxham (1996), Horvath, (2001).

0 below shows a framework of the interrelations between various dimensions of collaboration as presented by Huxham (1996). The dimensions have been divided into five key areas namely; empowerment and participation, power relationships, addressing conflict, ambitiousness and substantive change.

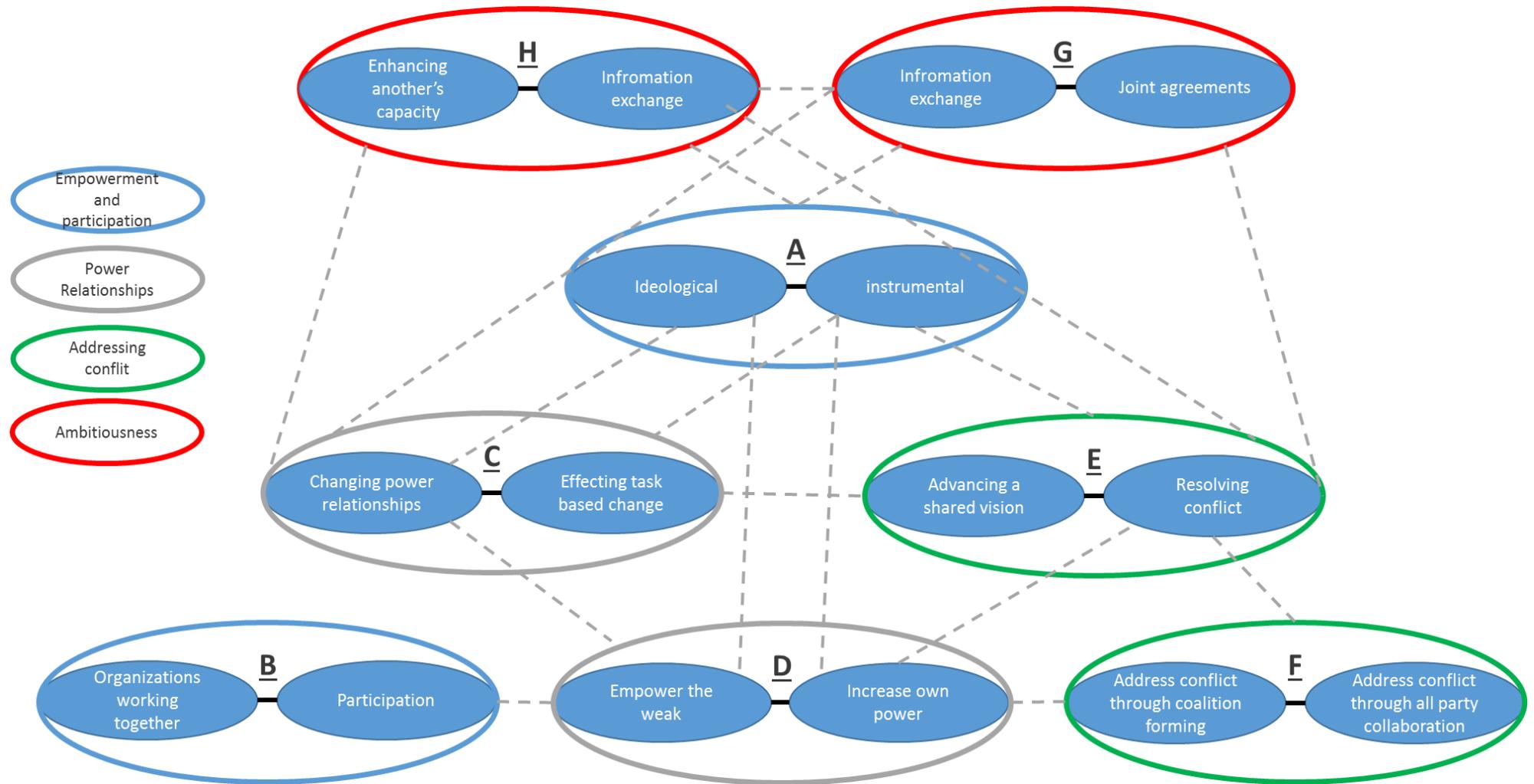


Figure 13. Dimensions of collaboration and key relationships between them Huxham (1996;10).

As seen in 0 above, the colour codes represent the key areas constituting the dimensions of collaboration. The first key area empowerment and participation includes two dimensions. *(A) Ideological – Instrumental and B) Organizations working together – participation*. All other dimensions are basically influenced by this first dimension (A). Ideological refers to collaboration driven by personal interests while instrumental refers to collaboration motivated by achieving a goal by working with others. Involvement in collaborations is depicted by the two options in (B). Organizations working together differs from participation based on the role of the participant in the process. A fundamental difference between these two lies in the fact that participation is entirely confined to the basis of providing one's own expertise. Organizations working together on the other hand refers creation of a mutual working relationship where parties involved not only offer their expertise but are involved in effectively ensuring the success of the overall goal.

The second key area is power relationships which are defined by the following two dimensions: *(C) changing power relationships – effecting task based change and (D) empower the weak – increase own power*. These two dimensions (C) and (D) are closely related. Huxham (1996; 11) suggests that collaboration can be an effective tool for strengthening weak areas various participants may have. Accordingly, giving mandate to the participants to influence not only their areas but also make decisions that influence the larger goal, effectively empowers participants and generates a sense of equality. This sense of equality makes “weaker” participants feel equally empowered as other participants. As a result, this will progressively minimize the power struggles in decision making to achieve a common goal.

The third key area is addressing conflict which includes the following two dimensions: *(E) resolving conflict – advancing a shared vision and F) coalition forming – all party collaboration*. If power relationships are effectively managed as described in (C) and (D), resolution of conflicts becomes much easier particularly with participants sharing a common goal. Dimension (F) is quite closely linked to power relationships. The rationale behind this is that with various levels of power, participants gang up to form coalitions and thus lead to more challenging conflict resolution.

The fourth key area is ambitiousness of the goals of collaboration and includes the following two dimensions: *(G) exchange of information – joint agreements and (F) information exchange – enhancing another's capacity*. Both these dimensions (E) and (F) are quite similar but differ based on which side of the collaboration a participant is on and

varies depending on the purpose for collaboration. Frow & Payne (2011; 233) state that knowledge sharing and authentic communication are critical in all levels of the organization and at all stages of different processes. Ultimately the key message is that communication is key in conflict resolution and creation of a common understanding of the goal. In addition, organizations need to consider what information is shared, to whom, at what point, its relevance and the purpose its intended.

A common inter-organizational challenge facing many service companies is how to maximize the efficiency of company activities that create value for the customer. Slater, (1997; 165). Accordingly, for organizations to successfully contribute and deliver in collaborative processes, we can iterate that; *“organizations need to create a common goal, give equal and adequate mandate to the participants and create an efficient platform for information exchange that will eventually result in effective conflict resolution and vision sharing.”* Kates & Galbraith (2007; 117) support this iteration by proposing practical examples of what should be done within the organization according the five-star model as illustrated in 0 below

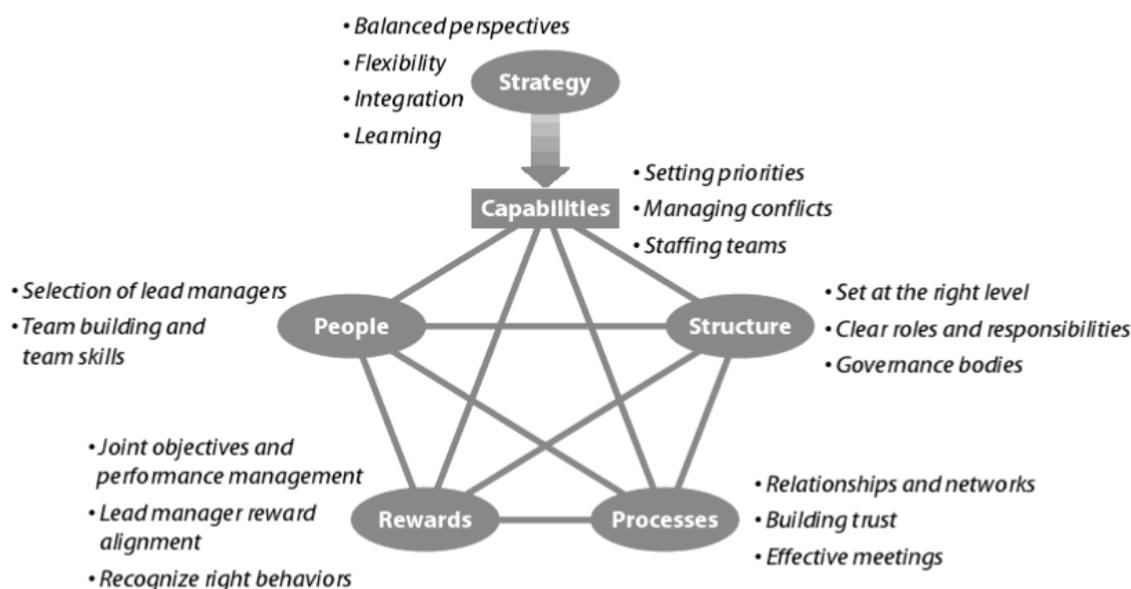


Figure 14. Considerations for developing and implementing a successful organization. Kates & Galbraith (2007; 117).

As seen in 0 above, the organizational structure needs to have clear roles and responsibilities with processes in place that build mutual trust and respect through effective communication and collaboration. Further, the organization needs to have a common set

of goals which facilitate inter-organisational collaboration and is recognized in the organizations reward system. This section has discussed how an organizational design with well-defined roles and responsibilities contribute effectively to the company's value proposition and strategy. The next section discusses how roles in an organization can be assigned to ensure effective collaborative processes in the value chain.

4.2.3 Assigning Roles & Responsibilities (RACI matrix)

(Jacka & Keller, 2009) describe the RACI matrix *“as a visual tool that helps isolate individual roles and responsibilities in the delivery of a process or within a department.”* The RACI matrix is an acronym that derives its name from the four different types of roles that are considered. These roles are discussed by Elhady & Abushama (2015) as listed below:

- (R)Responsible: person assigned to perform an activity or does the work.
- (A)Accountable: person who is answerable for completion of the activity.
- (C)Consulted: person whose opinion or feedback is sought or contributes to the activity.
- (I)Informed: person that needs to know on the progress of the activity.

The RACI matrix is developed using a five-step approach as described by Solomon (2015), Jacka & Keller (2009). The process starts with identifying the key process and functions within an organization and defining the main activities. The second step is to describe each activity in detail (as tasks) in the context of what happens in the process. This makes sure that specific tasks are independently described in the process. The third step is to identify the stakeholders and list them alongside the activities. The fourth step entails ensuring each task has a stakeholder who is responsible and accountable. The fifth and final step is to make an analysis and resolve any conflict where a task may have one or more persons responsible and accountable. The end result, which is a table, is shown as an example in 0 below.

Table 7. Description of RACI Matrix

		Roles / People		
		Stakeholder A	Stakeholder B	Stakeholder C
Tasks	Task 1	R	C/I	A
	Task 2	C/I	A	R
	Task 3	R	C	R/A
	Task 4	C/A	C/I	R

As seen in 0 above, the stakeholders or roles are listed on top of the table. The tasks are listed individually on the left of the table. However, the RACI matrix may end up with issues regarding roles and responsibilities in the process. This may arise because of conflicting views on who is responsible and accountable or more there being more than one stakeholder responsible and accountable for a task. This issue creates lack of ownership of the tasks and results in inefficient processes overall. Jacka & Keller, (2009; 256). Accordingly, Solomon (2015), Jacka & Keller (2009) suggest two types of analysis to resolve conflict in the matrix. These are Vertical Analysis and Horizontal Analysis.

Vertical Analysis looks at the roles of each stakeholder while horizontal analysis looks at the stakeholder roles in each activity. Jacka & Keller, (2009; 259). 0 below

Vertical Analysis		Horizontal Analysis	
<u>Finding</u>	<u>Possible interpretation</u>	<u>Finding</u>	<u>Possible interpretation</u>
Too many R's	Will the task get done? Can activity or decision be broken into more specific tasks? Is the individual overloaded?	Too many R's	Will the task get done? Can activity or decision be broken into more specific tasks?
Too many C's	Do all these individuals really need to be consulted? Do the benefits of added input justify the time lost in consulting all these individuals?	Too many C's	Do all these individuals really need to be consulted? Do the benefits of added input justify the time lost in consulting all these individuals?
Too many I's	Do all these individuals really need to be routinely informed, or could they be informed only in exceptional circumstances?	Too many I's	Do all these individuals really need to be routinely informed, or could they be informed only in exceptional circumstances?
Too many A's	Can some of the accountability be "pushed down" in the organization?	No R's	Job may not get done; everyone is waiting to approve, be consulted, or informed; no one sees their role as taking the initiative to get the job done.
No R's	Job may not get done; everyone is waiting to approve, be consulted, or informed; no one sees their role as taking the initiative to get the job done.	No A's	No performance accountability; therefore, no personal consequence when the job doesn't get done. Rule #1 in RACI charting: There must be one, but only one, "A" for each action or decision listed on the chart.
No A's	No performance accountability; therefore, no personal consequence when the job doesn't get done.	No C's / I's	Is this because individuals/departments "don't talk"? Does a lack of communication between individuals/departments result in parallel or uninformed actions?

Figure 15. Resolution of conflict in the RACI matrix using vertical and horizontal analysis. Royston (2008; 1-3).

As seen in 0 above, in vertical analysis, too many R's may mean that the person is overloaded with tasks and there is a risk that the activity is not completed (*Example: Stakeholder A & C in 0*). Too many A's indicates concentrated ownership which may lead to decision making being slowed down. Too many C's means a lack of clear ownership in the task and may result in a conflict from the perspective of task completion (*Example: Stakeholder A & B in 0*). Too many I's under one stakeholder leads to the situation where critical information is lost in the overload of information delivered to the stakeholder (*Example: Stakeholder B in 0*). On the other hand, No R's means that the task has no one to complete it while No A's means there is a clear lead in ownership of the task. In horizontal analysis, too many R's means the task has multiple executors who need to collaborate to get it done. Solomon (2015), Royston (2008)

The risk is that the task may not get done as there is no clear definition of who should do the task or if the division of responsibility is unclear. In this case, it is important to delegate a primary R and a secondary R. Solomon (2015; 7). (*Example: Task 3 in 0*). Too many C's in horizontal analysis has a similar interpretation as in vertical analysis but on a task level (*Example: Task 4 in 0*). Too many I's for one task means that many individuals need to be continuously informed on the progress of the task. While this may not necessarily be detrimental to the task completion, it is worthwhile to keep information sharing relevant as discussed in Section 4.2.2. No R's, and C's have a similar interpretation as in vertical analysis but on a task level. No C's / I's indicates a lack of communication during completion of the task. This may result in undesired results from the task as consultations and relevant information is not shared with the relevant stakeholders.

Solomon (2015; 7) states that it is also possible that a task has multiple A's. This only makes the approval process quite bureaucratic. In this case, it is important to assign critical tasks to have only one person accountable. Additionally, a stakeholder can have multiple roles particularly if a manager has subordinates. The manager may be accountable for completion of the task, consulted and informed. Accordingly, it is important for a manager to be able to delegate tasks and plan the work for his team so that the deliverables are met.

To ensure continuous development and tracking of the success of the organizational process and their contribution the CVP, continuous monitoring and measurement of the value chain activities and process (see Section 4.2.2) is required. Additionally, Hope, et al. (2011) state that companies need to continuously monitor and measure the value

proposition's performance by identifying Key Performance Indicators that are aligned with the strategy. The next session discusses how to set up KPIs that align to the latter.

4.3 Developing KPIs for the Organization

This section will give an overview of KPIs and will discuss how KPIs can be defined, built and implemented professionally for an organization.

4.3.1 Overview on KPIs

Parmenter (2010; 4) defines Key Performance Indicators as *“a set of measures focusing on those aspects of organizational performance that are the most critical for the current and future success of the organization.”* In addition to KPIs, there are three other types of performance measures- These are (1) Key Result Indicators (KRIs): measure critical success factors at strategic level, (2) Result Indicators (RIs): show what has been done and (3) Performance Indicators (PIs); indicate what should be done. Parmenter (2010). Hansen & Birkinshaw (2007; 11) argue that companies that adopt certain value chain perspectives will need to develop KPIs that focus on specific deliverables from each part of the value chain. For capabilities to serve as design criteria, they must be quite specific to the needs of a given business. In addition, KPIs should be measurable, as these become the leading indicators against which implementation progress will be measured. Kessler & Kates (2011; 64). Melnyk, et al. (2004), Magretta & Stone (2002) state that KPIs provide an important link between a company's strategy, its execution and the value creation processes in the value chain.

One of the most powerful management disciplines, the one that more than any other keeps people focused and pulling in the same direction, is to make an organization's purposes tangible. Managers do this by translating the organization's mission—what it, particularly, exists to do—into a set of goals and performance measures that make success concrete for everyone. This is the real bottom line for every organization—whether it is a business or a school or a hospital. Its executives must answer the question, “Given our mission, how is our performance going to be defined?”

Magretta & Stone (2002; 129)

KPIs serve a few purposes in a business. Firstly, as discussed in Section 4.2, KPIs act as a tangible goal against which the performance of the processes in the value chain are measured. Consequently, as the value chain activities contribute to the CVP, they can be used to measure the success of the CVP. Secondly, KPIs provide data which enables fact based decision making thus making execution of roles and responsibilities in the organization more efficient. Last but not least, KPIs that cut across the supply chain act as an “umbrella” which facilitates collaboration in the value chain.

4.3.2 Defining and Building KPIs

Franceschini, et al. (2007; 74-75) state that KPIs should be defined on two levels: Single (local) Level and Aggregated (global) level. Single level KPIs measure a specific part of the value chain process. Aggregated level KPIs consolidate single level KPIs to measure the performance of the whole value chain. Further, KPIs can be divided into the categories below; Lampathaki, et al. (2013):

- *Input Indicators:* used to comprehend resources utilized in production of outcomes.
- *Process Indicators:* used to comprehend the value chain process steps and activities utilized in production of outcomes
- *Output Indicators:* used to measure the outcome (product or service) of an organization’s processes
- *Outcome Indicators:* used to evaluate the desired results that may be generated from an outcome
- *Impact Indicators:* measure the direct or indirect effects or consequences resulting from achieving program goals.

Parmenter (2010), Franceschini, et al. (2007) argue that defining and building KPIs needs to take a top-bottom approach. This means that an organization’s strategy, in effect, is the starting point and dictates the focus areas for KPI development. 0 below shows the process of defining KPIs as discussed by the afore mentioned authors.



Figure 16. Description of KPI definition and building process.

As seen from 0 above, the process starts with the strategic plan. In this step, the organization's strategy is designed with the Critical Success Factors (CSFs) defined. Critical success factors the areas identified by an organization, from which results gained will ensure company success and create competitive advantage. Rockart (1979). In this step, the CSFs are broken down into smaller "chunks" which are business unit or organizational function specific.

In the second step, process analysis is done. This step includes three sub steps. Firstly, identification of an organization's value chain activities and the elements which the organization, customers and users interact with. Additionally, the first sub step involves identification of information to be managed during the KPI building process. The second sub step is to map out the process in a process map. In this sub step, process outputs, activities and outcomes are defined. The third sub step is to make an analysis of the process maps. In this sub step, the organization needs to determine process' efficiency and effectiveness by defining the key points of measurement by answering the questions how, where, and when. Further, it requires identification of process bottlenecks and pain points. Finally, this sub step identifies activities performed by multiple or different organizations. Velimirović, et al. (2011)

The third step includes collecting stakeholder needs in terms of KPIs that are considered important for them and aligning this with the overall strategy. Involvement of stakeholders in the KPI definition process helps to create a sense of "belonging" and it later simplifies the allocation of ownership of the KPIs developed. Franceschini, et al. (2007; 113-123)

The fourth step is selection of KPIs. After process analysis and collecting stakeholder needs, KPIs are prioritized as directly impacting CSFs or "good to have" for daily operations management. Focus is essentially given to KPIs that address the CSFs as compared to those that have an indirect impact. During this step, the calculation schema

behind every KPI is validated and tested in the organization with the relevant stakeholders (Baroudi, 2014). Additionally, it is also important to define the required corrective actions for deviations in the KPIs. KPIs selected should pass the SMART test as illustrated by Shahin & Mahbod (2007), Franceschini, et al. (2007). The SMART test is an acronym depicting five key elements that a KPI should have to be valid as shown below:

- S (Specific): The KPI should be detailed and focused, so it avoids misinterpretation?
- M (Measurable): The KPI should be quantitative or qualitative and comparable to other data? It should allow for meaningful statistical analysis.
- A (Attainable): The KPI should be achievable, reasonable, and credible under expected conditions
- R (Realistic): The KPI should fit into the organization's constraints
- T (Timely): The KPI should have a time frame as part of the goal which allows progress to be measured.

Finally, the last step is developing a reporting framework for the KPIs. This step involves the development of KPI dashboards and reporting processes around the designed KPIs and reports. The development of dashboards involves firstly mapping of the data collection process for the KPIs. If the data is gotten directly from some IT system or database, then integration to these is done. If the data is collected through a manual process, the templates for data collection are made with definition of when, how and who will collect the data. Secondly, the KPI calculation schema is implemented using actual data and validated in collaboration with key users. Third, the report dashboards (layouts and interfaces) are created and validated by key stakeholders / end users. Finally, training on the KPIs and the reporting processes is given to the organization. The purpose of the training is to review and give an insight on what KPIs are being reported, when and how often reporting happens, how reporting happens, key users for the reports and to whom the KPIs will be reported. Parmenter (2010; 86-95)

Once the KPIs are defined and built, the next step is to implement them in the organization. However, as it will be discussed in the next section, a successful implementation process begins well in advance of defining and building KPIs. The next section discusses how to effectively implement KPIs.

4.3.3 Implementing KPIs

As mentioned in the previous section, the implementation of KPIs does not begin after they are defined and built. The process discussed in Section 4.3.2 is not an independent process rather, an iterative one that runs concurrently with the implementation process. Parmenter (2010); Franceschini, et al. (2007) discussion on the implementation of KPIs is illustrated in 0 below.



Figure 17. Description of the KPI implementation process.

As see in 0, the KPI implantation process begins with creating senior management commitment. Parmenter (2010) argues that KPIs need to be sold to senior management on emotional drivers and not logic. This means showing that a right set of KPIs, that link daily operations to the strategy, would make the understanding of the business much easier. Consequently, with adequate insight into the business, decision making would be made much easier thus saving time for them. and consequently, the decision-making process much easier. Typically, at this point there would be a project lead driving this process. In this step, it is also important, that the project lead gives insight to the management into what direction the organization's KPIs will take.

The second step is establishing a KPI team. The KPI team is comprised of key resources from the different business units and functions. The team is essentially responsible for the process discussed in Section 4.3.2. The project team needs to develop a deep understanding of the organizations CSFs as they will be responsible for linking and mapping the value chain activities to this. The project lead will play a key role in (a) training the project team regarding better communication techniques as these will be key during interactions with the organization's stakeholders, (b) facilitating workshops for KPI development and (c) competence training on reporting platforms and new systems. Parmenter (2010).

The third step is setting up a KPI development strategy. Once the KPI team has been established, this step is the first course of action. The strategy needs to look at existing organizational KPIs and culture and plan the introduction of the new way of working with an appreciation of what's existing. Parmenter (2010). Additionally, the KPI strategy should dictate an approach that is flexible depending on the organizational structure and culture. This is because it may prove quite challenging to develop KPIs across multiple business units in terms of coordination of resources.

The fourth step is to market the KPIs to the employees. This may be scheduled in phases to give information of the progress of KPIs being developed. In this step, the following tasks as described by Parmenter (2010) are crucial: (a) collect feedback to find out the current perceptions on existing organization KPIs and concerns about the new project (b) demonstrate that KPIs are part of strategic initiatives to respond to the pressures on the organization (c) generate interest by painting a picture of a better work place with the new KPIs (d) Structure roadshow briefings so that all employees hear the message, taking into account language skills, literacy, and shiftwork patterns and (e) introduce new reporting tools and framework.

The final step is training the organization on the new KPIs, new reporting procedures and platforms. As discussed in Section 4.3.2, the definition and building of KPIs is part of the implementation process. As such, continuous and scheduled training will be needed to ensure the organization's competences are updated as the KPIs are updated.

4.4 Conceptual Framework of This Thesis

This section proposed an approach from existing literature in the context of meeting the objective of this thesis. The existing literature was synthesized and key themes identified to build a conceptual framework. The conceptual framework is made up of two key elements as shown in 0 below.

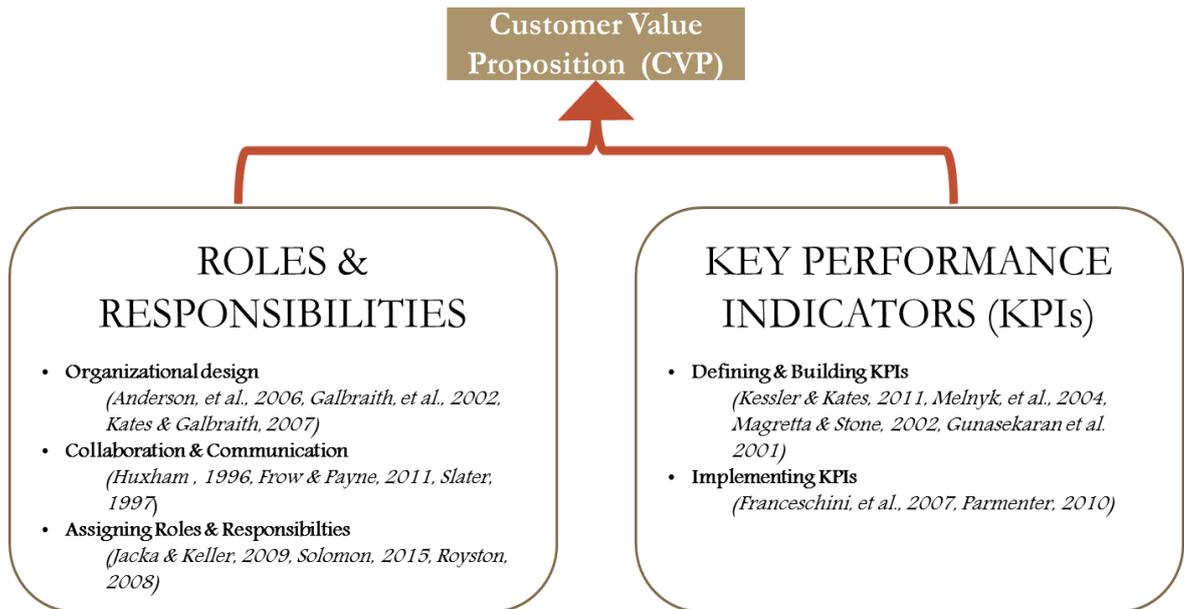


Figure 18. Conceptual Framework for Aligning Stakeholder Roles, Responsibilities and KPIs.

As seen in 0 above, the conceptual framework consists of Roles & Responsibilities and KPIs as contributors to the CVP. Each key theme is listed under each element with key sources named. The first element, Roles & Responsibilities has been discussed in Sections 4.2.1, 4.2.2 & 4.2.3. The second element, KPIs have been discussed in Sections 4.3.2 & 4.3.3. This conceptual framework will be used to build a proposal approach on roles, responsibilities and KPIs for the case company in next Section 0.

5 Building the Proposal for Aligning Roles, Responsibilities & KPIs

The section presents the proposal built by merging the results of the current state analysis and the conceptual framework towards co-creating the proposal. The section is divided into three sub-sections. The first sub-section gives an overview of the proposal building stage and how the proposal was built. The second sub-section discusses findings from the proposal building. The third sub-section discusses the proposal which will be presented to senior management for feedback.

5.1 Overview of the Proposal Building Stage

The proposal building was done in three steps. In the first step, the current state analysis (Section 0) was conducted for the SCS service using qualitative methods. Data (data 1) was collected from interviews held with stakeholders as well as internal documentation. In the second step, concepts from literature (Section 4.4) were utilized with a focus on the weaknesses found from the current state analysis. In the third step, the researcher built a preliminary draft of the proposal based on co-creation with the stakeholders in several rounds, including the discussions and feedback (Data 2) from the key stakeholders, as discussed in Section 2.3.

The key stakeholders involved in co-creation of the proposal were mainly process experts from the three business units. Input and feedback from the key stakeholders were considered while developing an improved solution to senior management for feedback.

There were two theme workshops for building the proposal. In the first workshop (Workshop 1) an approach for Roles & Responsibilities for the SCS service was co-created with the stakeholders. In the second workshop (Workshop 2) an approach for building and implementing KPIs was reviewed with stakeholders. The workshops were held separately as this ensured that the participant discussions would give focus to both themes.

5.2 Co-creating an Approach for Aligning Roles & Responsibilities

Based on the issues found out regarding roles and responsibilities in Section 3.4.2, the RACI matrix tool discussed in Section 4.2.3 was discussed and considered an appropriate approach to build the proposal. The development of the proposal was done in two rounds.

Round A. Input from the Stakeholders and Previous Step into the Proposal

The first step was to describe the key tasks per phase of SCS service (Section 3.3). For the RFQ phase 7 key tasks were identified, for the implementation phase, 17 key tasks were identified, and for the production phase 4 key tasks. For each task, a role was assigned (Section 4.2.3) based on the experience of the project team involved with the SCS customer pilot and internal consultations with key stakeholders. The result of the RACI matrix is shown in 0 below.

As seen in 0 below, the tasks are divided in the three phases that comprise the SCS service. These are the RFQ phase, Implementation Phase and Production Phase. The roles according to the RACI matrix are color-coded accordingly. Under each phase the key tasks are listed. The key stakeholders (on a department level) are listed on top of the table. Additionally, based on comments from process expert, an additional column (task deliverables) was added. The task deliverable column in this proposal is empty because the deliverables that would be defined for the tasks defined were deemed to be too generic. This is discussed in Section **Error! Reference source not found.** Assigning roles using the RACI tool helps to clarify responsibilities for tasks between multiple stakeholders.

Figure 19. Description of the proposal for the Roles and Responsibilities.

TASK DESCRIPTIONS	STAKEHOLDERS						TASK DELIVERABLE
	SALES	BUSINESS	PROCESS EXPERTS	PRODUCTION	ICT	CUSTOMER SERVICE	
RFQ PHASE							
Project Management	R	A					
Collecting Data	R	C	C				
Mapping the Process	C		R				
Price Calculation	R	A/I	R/C				
Identification of Products	A	R	C				
Preparing Material	R/A	C	C				
Organizing Internal meetings		R					
IMPLEMENTATION PHASE							
Project Management	I	A	R	C		I	
Definition of customer requirements	R		I				
Definition of business requirements		R	I				
Defintion of governance model	R	R	C		C	C	
Development of governance model	I	I	R	I	C	C	
Process Definition			R				
Process Development	I	C	R		C		
Process Planning			R	C			
Process Implementation			R	C			
Product Development		R					
Defining SLAs	R	I	C		I	I	
Implementation of SLAs			R				
Employee Training			R/A	I			
Definition of IT requirements		C	C		R/A		
Development of IT requirements		C	C		R/A		
Implementation of IT requirements		C	C		R/A		
Customer Communication	I	R	C		C	C	
PRODUCTION PHASE							
Process Development	I	I	R	I	I		
Delivery of service			C	R/A			
Exception management	I		C			R	
SLA management	I			R		R	

Responsible
Accountable
Consulted
Informed

SCS SERVICE

After the RACI matrix was done for the SCS service, the next step was to conduct a vertical analysis as discussed in Section 4.2.3. The purpose of this was to identify which stakeholders are (A) either overloaded or underloaded with execution of tasks (B) receiving too much / less information regarding tasks in a particular phase (C) accountable for too many tasks (D) are over-consulted or under-consulted in a particular phase.

0 below shows the results of the vertical analysis.

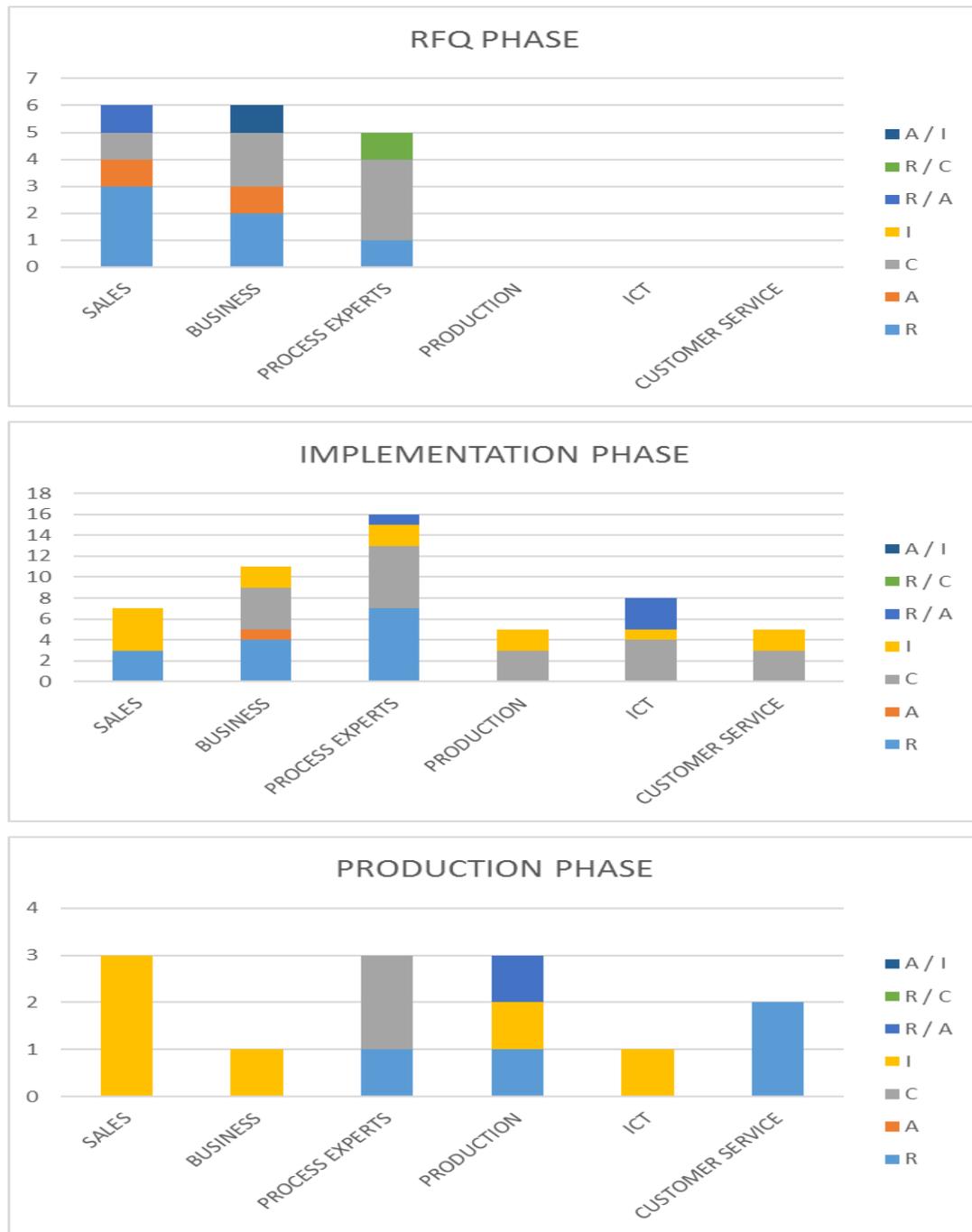


Figure 20. Vertical Analysis of Roles and Responsibilities for the SCS Service.

As seen from 0 above, the roles of the stakeholders involved in the SCS service varied quite much in each phase of the service. The Y-axis indicates the number of tasks while the X-axis indicates the stakeholder. Beyond the four main roles, there are also roles that combine two main roles such as R / C, R / A and A / I. The roles according the RACI matrix are color-coded accordingly. During the RFQ phase the number of tasks are executed by Sales, Business then Process Experts respectively (No. of R's). During this phase, production, ICT and Customer Service basically have no role. Also, important to note that Business plays multiple roles for some tasks. These stakeholders are informed and are also accountable for the tasks as indicated by the share of A / I 's in the graph.

Additionally, there is a lot of consultation on going between the three stakeholders as indicated by the size of the C's per stakeholder. During the implementation phase, Process experts, Business then Sales respectively have the most tasks to be done. Process experts, naturally, have the highest number of roles for various tasks because they possess most required competences. This phase is mainly about development of the new processes according to customer and business requirements. Accountability at this phase is minimal and Business has accountability for only one task. However, information sharing during this phase is quite evenly distributed. Each stakeholder is informed about the tasks that affect the execution of their respective tasks.

During the production phase, a key to note is that there is no stakeholder accountable for the execution of tasks. All other stakeholders apart from Customer Service & Process experts and informed about the execution of some tasks. Another key finding, is that only at this phase is customer service involvd in execution of tasks.

Round B. Feedback on the Approach for Aligning Roles & Responsibilities

During Workshop 1, input and feedback comments were collected from the stakeholders. These are summarized in 0 below.

Table 8. Summary of feedback from the proposal for Roles and Responsibilities. (Data 2).

Current State Analysis Findings	Conceptual Framework	Proposal	Data 2 Challenges Identified	Data 2 Improvement Proposals
Poor resource Allocation and personnel involvement during the different phases of designing and implementing the SCS service.	Assigning roles & responsibilities	RACI Matrix	How do we get the stakeholders to shift commitment allegiances from the old way of working where "my area of influence / process is all that is important"	<ul style="list-style-type: none"> • Break down the subtasks in the RACI matrix even further. • Create a detailed level of responsibility, accountability, and information sharing.
Ineffective Communication between stakeholders.	Organisational design & collaboration		The case company has a big organization. How do we ensure information gets to the right people and in the right context?	<ul style="list-style-type: none"> • The detailed RACI matrix should contain grouped tasks according to major themes with the contact details of those be consulted / informed. • Create a common forum for sharing successes and failures
Collaboration challenges between the three business units	Organizational Collaboration		How do we create visibility in the process so that stakeholders understand the "bull whip" effect	<ul style="list-style-type: none"> • Internal "job exchange" • The detailed RACI matrix should contain grouped tasks according to major themes with particularly clearer accountability.
				Not all boxes in the matrix have been allocated delegations

As seen in 0 above, the CSA findings in Section 3.4.2 are matched with the corresponding literature elements from the conceptual framework in Section 4.4. As discussed in the previous Section 5.1, the RACI matrix was chosen as the tool to build the proposal for the case company as this incorporates the three themes from the conceptual framework. Regarding improving collaboration in providing the SCS service, since the proposal used quite high level tasks, it led to the situation where there were multiple roles or some roles for tasks were missing.

“Due to a company culture that has been existent for years, for this to work the tasks need to be broken down to a very detailed level to ensure clarity and commitment”

Data 2: Workshop 1(Process Expert)

Additionally, the process experts noted that internal “job exchanges” would play a big part in improving collaboration between stakeholders. For instance, warehouse personnel, would spend a day in the transportation terminal to get a deeper understanding of the overall process for the SCS service. Consequently, better understanding of the overall process would effectively create a delivery of the SCS service.

The above sentiments, regarding breaking down the tasks to a detailed level, equally apply to improving communication and information sharing between the stakeholders. Additionally, instead of department level roles, it would be beneficial to have named stakeholders in the RACI matrix. In an organization, as large as the company has, this is vital because it may take a long time before someone figures out to whom should be informed about tasks.

Finally, better assignment of roles to the detailed tasks would make their delegation to stakeholders more even, albeit it depends on the competences of the stakeholder to execute the task. In addition, the latter would make it easier to define deliverables which are task specific in the case such exist

5.3 Co-creating an Approach for Developing KPIs

The proposal for developing KPIs was done during Workshop 2. 0 below shows the co-created KPI proposal, which was done in two development rounds.

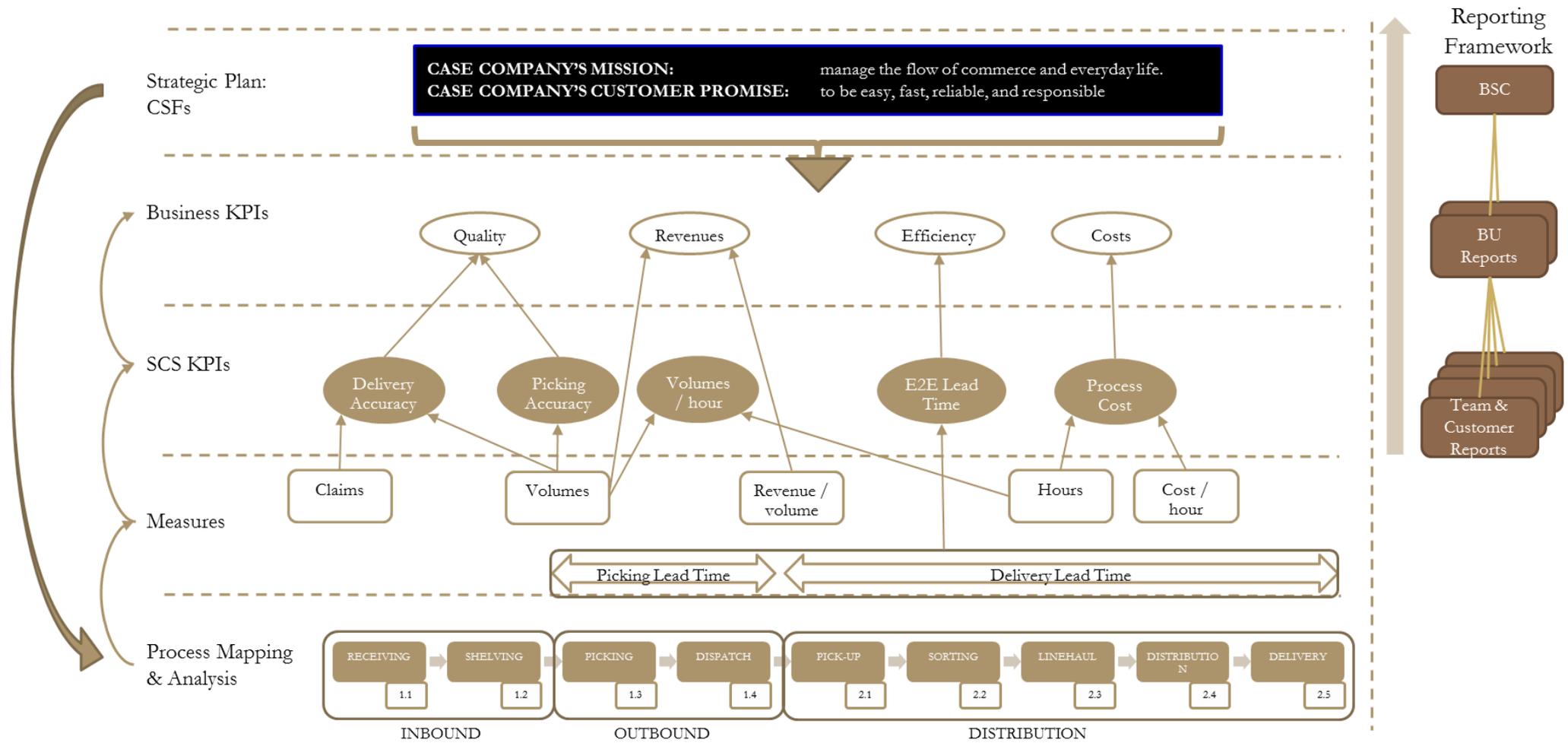


Figure 21. Proposal for developing KPIs.

Round A. Input from the Stakeholders and Previous Step into the Proposal

As seen in 0 above, the development of KPIs took a top-bottom approach in the first step then a bottom-up approach for the other steps as indicated by the arrows on the left side. This approach was built considering only the key process measures that contribute to the case company's strategy.

The first step was the description of the case company's strategy. Based on the strategy (mission & customer promise) shown in 0 above, several business KPIs were chosen with the idea that they directly contribute to the case company's strategy. The chosen business KPIs were quality, efficiency, costs and revenues. Quality contributes to the case company's mission, while efficiency costs and revenues contribute to the case company's customer promise.

The second step was to make a high-level process map identifying key processes from the SCS service. This high-level process map was refined from the already existing process map described in the CSA, Section 3.4.3.

The third step was to identify the measurements from the refined process maps. In this step, only those measurements that contribute to the case company's strategy were considered. These measures were used to calculate SCS KPIs which are the local KPIs discussed in Section 4.3.1. The fourth step was to aggregate these KPIs (see Section 4.3.1) to the Business KPIs that were described in the first step. Finally, the KPI development approach proposed a reporting framework that takes a bottom – up approach.

Round B. Feedback on the Approach for Developing KPIs

Unlike the proposal discussed in Section 5.2 where the proposal was built iteratively with the stakeholders during Workshop 1, the researcher developed the KPI proposal for stakeholder review in Workshop 2. The proposal was developed predominantly using literature on defining and building KPIs presented in Section 4.3.2. The 0 below shows a summary of feedback received from Workshop 2.

Table 9. Summary of feedback from the proposal for the KPIs. (Data 2).

Current State Analysis Findings	Conceptual Framework	Data 2 Challenges Identified	Data 2 Feedback
Unclear SCS KPIs	Defining & Building KPIs	How will targets be set for the SCS service?	<ul style="list-style-type: none"> An practical model that is applicable and scalable for the whole SCS service A standardized model should be available already in the RFQ phase of the SCS service.
Lack of clear KPI ownership	Implementing KPIs	Who will have ultimate SCS KPI ownership and mandate?	

As seen from 0 above, existing literature (Sections 4.3.2 & 4.3.3) was utilized to tackle the weaknesses identified from CSA. Two key challenges were identified with the proposed approach.

First, with this KPI development proposal, Workshop 1 participants considered that KPI target setting using a bottom-up approach might prove to be a challenge considering the case company's current operational model. Previously there have been no targets for the SCS service set from within the business. The targets have been set by the customer and consequently the case company has more or less had to oblige. However, participants considered the proposed approach as a step towards the right direction for the case company to eventually set targets. In regard to this topic, the participants considered that a standardized approach should be developed so that targets are available already during the RFQ phase of the SCS service.

Second, the participants viewed ultimate KPI ownership as a challenge. This is because the business unit responsible for the SCS service, as described in Section 3.2.1, is focused on providing warehousing solutions and does not have clear neither mandate nor visibility into the other two business units providing e-commerce and transportation solutions.

"Excellent approach where the starting point and ultimately focus is the company strategy which is cascaded upwards starting from process analysis.

Data 2: Workshop 1(Process Expert)

Overall, the proposal for the KPI development approach was accepted as a way forward as it ensures that (1) the stakeholders were clear on their contribution towards the SCS service albeit still having local KPIs by the virtue of KPIs being built from a common goal (strategy) (2) ownership of the strategy is cascaded down to the lower levels of the organization.

5.4 Summary of Initial Proposal

For building the initial proposal during workshops, stakeholder input and feedback (Data 2) were collected. The summary of key improvements to the proposal is presented below.

First, regarding the proposal for aligning roles and responsibilities, the RACI matrix could be developed on two fronts. First the tasks proposed in the approach are to be reviewed and broken down to more detailed specific tasks. As a result, roles assigned will be more clear and on detailed level thus avoiding conflict in delivery of tasks. In the initial proposal, the tasks described are on a high level and contain many sub-tasks. Additionally, having detailed tasks will make the definition of deliverables clearer. Second, in the initial proposal, the stakeholders were departments / organizational roles in the case company's organization. The stakeholders could be defined to specific named persons in the organization. Due to the fact that the case company has a very large organization, roles assigned to specific persons will save time that would be spent finding the correct persons from a named department.

Second, as for the proposal for KPI development, there was no change proposed to the initial proposal. The issue regarding the target setting as discussed in 0 can only be reviewed and implemented once the proposal is piloted for the whole SCS service. Additionally, the issue regarding ownership of the SCS service in terms of which business unit in the organization should be responsible for it, falls out of the scope of this study.

The initial proposal iteratively developed in this study was then presented, alongside the improvement proposals discussed in this section, to management for review. The next section discusses the higher management feedback to the proposal.

6 Management Feedback to the Proposal

This section describes the results of the validation and presents the final proposal based on the feedback from the validation stage.

6.1 Overview of Validation Stage

After co-creating the proposal with the key stakeholders based on the results of the CSA (Data 1), findings from literature review and the stakeholder input (Data 2), the initial proposal was submitted to the validation and feedback session to the management of the case company.

In this stage, the management of the case company was interviewed and asked to provide feedback to the initial proposal. Feedback and validation (Data 3) of the initial proposal, developed earlier in Section 0, was gathered using similar interview methods as those utilized in collecting Data 1. The validation session started with presentation of the CSA findings, overview of the conceptual framework used and finally the initial proposal. After this a discussion on the initial proposal was held.

The received feedback was reviewed and categorized based on its impact to the outcome of this study. Feedback categorized as "mandatory" is used to develop the final proposal which is the outcome of this thesis. Other feedback categorized as "issues to consider" is documented as reflections and recommendations. The outcome is the final proposal for the roles, responsibilities and KPI's ("approach") for the three business units.

6.2 Feedback on the Initial Proposal for Aligning Roles & Responsibilities

Since the SCS is a new service for the case company, the first round of validation discussion focused on breaking down the tasks into detailed sub-tasks to make delegation of roles easier. Accordingly, a standardized process for the delivery of the service is merely existing because of variations and differences in customer requirements. Due to this reason, it was emphasized that a common roles and responsibilities approach would have to be made separately for each customer. In addition, management reiterated that perhaps having tasks broken down into detailed sub-tasks would create more customization than standardization of the customer process.

Additionally, it was assumed that having many subtasks can cause confusion as for defining the roles. Usually, it is more likely than not that there will be a person responsible for the task but there is not always someone who is accountable, consulted or informed. Accordingly, not all the tasks need to be broken down. As such, it was concluded that the initial approach before breaking down the tasks might be more applicable for the SCS service during this “infancy” stage.

Next, the RFQ phase of the SCS service may last from a few weeks to years. This phase varies from the other phases because the negotiation process with the potential customer depends on the complexity of the customer requirements among other factors.

Additionally, it was reminded that internal competences needed and tasks executed during the RFQ phase vary from case to case. This makes it very hard to assign roles to tasks and specific stakeholders. Accordingly, it was concluded that the RACI matrix would be more applicable for the implementation and production phases of the SCS service. However, since every RFQ phase has a project plan, it was concluded that the RACI matrix can be used alongside the project plan as a support tool for project management.

Overall, the initial proposal was approved and validated, and the proposed RACI matrix was well received. Improvement suggestions from the initial proposal were not discussed.

6.3 Feedback on the Initial Proposal for Developing KPIs

Regarding the KPI approach, it was especially acknowledged that the proposal has the company strategy as a starting point for KPI development. This ensures that focus is given to the critical KPIs that contribute to the strategy and consequently makes leading the business much easier. As mentioned in the previous section, the process is not standardized for the SCS service due to customer specific customizations. A key question then is how much can this approach accommodate for customizations given to the customer particularly at the lower levels. However, it was concluded that, similar to the feedback received during the development of the initial proposal, this approach would give the foundation for eventually having a standardized set of KPIs.

In addition to having the process KPIs as proposed in the approach, the SCS customers have required additional KPIs from the case company. These are, for example, customer service performance KPIs. Accordingly, a question was raised regarding how these additional KPIs can fit into the proposed approach. Customer service handles claims and enquiries regarding orders from the customers and thus require visibility into the SCS operations process and data. In regard to this, it was proposed that Customer Service get involved, as “consultants” who have access to the customer, in the KPI building phase. This would ensure that the critical issues Customer Service tackles would be taken into account in KPI reporting. Additionally, this would require that Customer Service gets training on the KPIs. On the other hand, regarding Customer Service specific KPIs, the KPIs are measured using a different process and systems. Therefore, it was proposed that these KPIs be evaluated for the possibility of having the KPIs in the final reporting platform.

Overall, the proposal for aligning SCS KPIs was well received particularly regarding having the company strategy as a starting point for KPI development and creating accountability and ownership in the organization.

6.4 Final Proposal

Since the objective of this thesis is to *propose an “approach” to align the roles, responsibilities and key performance indicators for the stakeholders from the 3 units to operate toward the common service goal*, the feedback received from management did not suggest any further improvements to the initial proposal. Accordingly, the outcome of this thesis which is *an approach to align the roles, responsibilities and KPI’s* for the three business units is summarized in two parts below.

First, 0 below shows the final KPI approach proposal that will align the three business units.

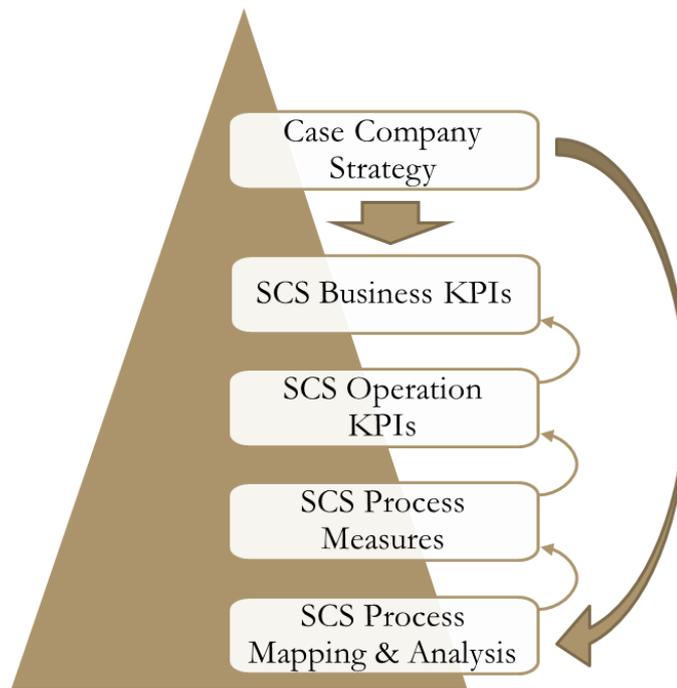


Figure 22. Final KPI Approach Proposal.

As seen from 0 above, development of KPIs that align the three business units in this case study starts from the case company's strategy. This proposal suggested an approach for building KPIs that would align the three business units towards a common service goal. The approach indicates that KPI development should ultimately start from the case company's strategy. From the company's strategy, key business KPIs are identified. The next step is to map and analyze the SCS process. From this process, the process measurements are identified which are used to calculate various operational KPIs. Operational KPIs are then cascaded upwards either as-is through appropriate aggregation methods to form SCS and business KPIs.

This is translated to critical SCS KPIs that contribute to the strategy. After this, the process is cascaded to the lower levels where the SCS process will be mapped and analyzed resulting in process measures. Consequently, there process measures will be used to create SCS operational KPIs which will then be aggregated to the business KPIs.

Second, 0 below shows the final roles and responsibilities approach proposal that will align the three business units.

Stakeholders	RFQ PHASE			IMPLEMENTATION PHASE			PRODUCTION PHASE		
	Task 1	Task 2	Task n	Task 3	Task 4	Task n	Task 5	Task 6	Task n
SCS DEPARTMENTS									
Sales	R	R	C	I	R		I		I
Business	A	C		A		R	I		
ICT							I		
Customer Service				I					R
WAREHOUSING									
Process Experts		C	R	R	I	I	R	C	C
Production				C			I	R/A	
FREIGHT									
Process Experts		C	R	R	I	I	R	C	C
Production				C			I	R/A	
PARCEL									
Process Experts		C	R	R	I	I	R	C	C
Production				C			I	R/A	
Task Deliverables									

Figure 23. Final Roles & Responsibilities Approach Proposal

As seen in 0 above the research suggests the use of a detailed RACI matrix to define the roles and responsibilities of the three business units and other stakeholders for the SCS service. Each phase of the SCS service has defined tasks which are allocated to the stakeholders using the proposed approach. The case company needs to first create visibility into the SCS service by mapping the entire SCS process to identify the activities in the process. After this, the primary tasks and subtasks for each activity need to be defined. Key stakeholders in the SCS service need to be identified and preferably listed by name and not on an organizational function level. Subsequently, the final step is to allocate a role for each stakeholder based on the RACI Matrix. This approach clarifies roles, enhances collaboration and communication and ultimately creates accountability within the organization.

Thus, the outcome of this thesis is *an approach to align the roles, responsibilities and KPI's* for the three key stakeholder business units.

7 Conclusions

This section summarizes the results of this study and provides recommendations for the case company.

7.1 Executive Summary

This study proposed an approach for aligning multiple stakeholder roles, responsibilities and KPIs towards a common service goal. The case company has recently established a new service, Supply Chain Solutions (SCS). Previously, the case company offered warehousing, transportation and parcel services as individual solutions to customers. Each solution was owned by an independent business unit. The SCS service was developed with the notion that these three business units would work together, contributing within their own expertise to the one and same end in terms of the customer offering. Thus, the SCS service is a holistic logistics service providing end-to-end logistics solutions for B2B customers. However, currently these three business units operate in effect more or less as independent silos with their own Key Performance Indicators which poses a challenge in terms of supplying the new service.

The study was done in several stages and used a case study approach for exploring the case. In the first stage, the current state analysis (CSA) was done by holding interviews with identified key internal stakeholders from the three business units as well as the customer. Additionally, internal documentation regarding the service was analyzed. The study focused on analyzing the SCS customer pilot, which was implemented less than a year before the start of this study. The outcome of the CSA was strengths and weaknesses of the SCS service in terms of roles, responsibilities and KPIs (Data 1). In the second stage, based on the outcomes of the CSA, existing literature was studied to find best practices for aligning organizational roles and responsibilities and developing common KPIs. The outcome of this stage was a conceptual framework for building the solution. In the third stage, a proposal was built iteratively during theme workshops with key internal stakeholders. This proposal was built using the CSA outcome and conceptual framework (Data 2). Finally, the proposal was presented to management for feedback (Data 3). The final approach proposal was then developed based on the feedback

The study resulted in two proposals that should help to align the roles and responsibilities and build the common KPIs for the new SCS service. The first proposal suggested an approach how to aligning the roles and responsibilities in provision of the SCS service. The case company needs to first create visibility into the SCS service by mapping the

entire SCS process to identify the activities in the process. After this, the primary tasks and sub-tasks for each activity need to be defined. Key stakeholders in the SCS service need to be identified and preferably listed by name and not on an organizational function level. Subsequently, the final step is to allocate a role for each stakeholder based on the RACI Matrix approach. This approach proposal clarifies roles, enhances collaboration and communication and ultimately creates accountability within the organization.

The second proposal suggested an approach for building KPIs that would align the three business units towards a common service goal. The approach indicates that KPI development should ultimately start from the case company's strategy. From the company's strategy, key business KPIs are identified. The next step is to map and analyze the SCS process. From this process, the process measurements are identified which are used to calculate various operational KPIs. Operational KPIs are then cascaded upwards either as-is through appropriate aggregation methods to form SCS and business KPIs.

The proposal suggested in this study which help to ensure better inter-organizational collaboration, was well received by the management. The proposal was evaluated as the first significant step which the case company plans to utilize to implement on a more detailed and larger scale. It was emphasized that, by utilizing these proposals the case company will achieve better delivery of the SCS service.

7.2 Next Steps and Recommendations toward Implementation of the Proposal

This study was conducted to propose an approach for aligning multiple stakeholder roles, responsibilities and KPIs towards a common goal. The scope of this study focused on one customer whose operations are limited to the services provided by the company. Due to this scope and other issues identified during this study, the researcher makes the following recommendations for consideration and next steps.

First, Data 1 and Data 2 identified a challenge that might arise in the implementation of this proposal due to lack of standardized processes resulting from customer process customizations. The case company needs to agree on a standardized process and give a threshold for customizations for future customers. This is crucial in achieving consistency in organizational KPIs and implementation of roles.

Second, as the digitization continues to disrupt logistics environments and customer behavior, companies need to have real time visibility in their processes. The conventional KPIs have a backward-looking perspective. This means they show performance of the process after it has happened. The implementation of the KPI approach needs to enable real data availability and consequently the case company's visibility in to the supply chain. Further, with standardized processes, it is possible to define consistent process deviation thresholds. These thresholds will offer a baseline to develop forward-looking KPIs where deviations can be predicted before they happen. Ultimately this will significantly improve process efficiency. Debatably, battles to win customers are no longer based on the traditional "cheapest is best", but on the amount of additional value a company can provide to its customers. For instance, with real time data, the case company would be able to make dynamic real time re-routing of customer shipments to ensure the customer promise is always met.

Third, the SCS service also involves collaboration with other 3rd party logistics (3PL) providers. The dynamics of interorganizational collaboration may differ to those of company-company collaboration as the processes, ways of working and IT systems may differ vastly. Accordingly, a crucial next step would be development of the proposals from this study with the inclusion of these 3PL providers.

Forth, the researcher considers that case company's organizational structure in its current setup presents a challenge in management and delivery of the SCS service. The business unit in charge of the SCS service predominantly focuses on warehousing solutions and operations. At the same time the SCS business side sells holistic services to customers. Accordingly, the SCS business unit does not have direct mandate on neither the freight and parcel production nor business operations. With regard to this, it is recommended that the case company considers reviewing its organization structure using this approach for instance: (1) there would be one business unit, comprised of freight, parcel and warehousing, with mandate over only the business side of SCS (2) there would be one business unit, comprised of freight, parcel and warehousing, with mandate over only the operations side of SCS.

Forth, the case company's is very rich in logistics competences. However, these are concentrated or located in their own departments in the organization. The SCS service would benefit greatly from having experts for have an understanding of the big picture.

Accordingly, the case company should consider development of internal competences through either job rotation or internal job exchange programs.

Finally, as the proposal presented was deemed to be an excellent proof of concept, the case company should consider moving forward with implementation of the proposal. One of the main issues to be considered in the implementation of the proposal is change management and getting a buy-in from all levels of the organization. For this step, concepts on implementation of KPIs (Section 4.3.3) can be utilized as a framework.

7.3 Thesis Evaluation

This section first evaluates the outcome of this study by comparing it to the objective and also based on the elements discussed in the plan in Section 2.4.

7.3.1 Objective vs Outcome

The objective of this thesis was to *propose an approach* in terms of roles, responsibilities and key performance indicators, which align the stakeholders from the case company's 3 business units to operate toward the common service goal. The outcome of the thesis is a *roles, responsibilities and KPI's approach* for the three key stakeholder business units. The outcome of the thesis was a result of development of a proposal using findings from CSA and existing literature. The outcome of this thesis is a proposal that enhances interorganizational collaboration and communication through clear delegation of roles and enhance accountability. The KPI approach proposal suggests a top-down approach to create accountability of KPIs and a bottom-up approach to align the KPIs in the three business units. For these reasons it can be concluded that the objective is achieved.

7.3.2 Reliability and Validity

Reliability of this study was ensured by using detailed data from knowledgeable experts who were interviewed and analysis of internal company documents during data collection. Additionally, the researcher also utilized his own experience as a participant in the implementation of the SCS service for the pilot customer. However, concerning possible biases as for the results, the researcher's role was mainly limited to data collection and analysis and aimed to report the findings. Importantly, all results and intermediate suggestions were developed collaboratively and iteratively, and submitted during theme

workshops to the organization for review. As the research outcome is vital for the company's goal for the future, this approach allowed the researcher to analyze the existing case through analysis of qualitative data that fortifies the reliability of the outcome

Validity of this study was ensured by creating a proposal, together with company experts, based on the current state analysis with the findings from the existing knowledge. Theme workshops are conducted with stakeholders and management where feedback is collected for improvement of the proposal.

7.3.3 Relevance and Logic

Relevance in this study was ensured by defining the business challenge to be researched, designing the appropriate research design to answer the business challenge and using exiting knowledge relevant to the case. Additionally, the proposal was developed together with various stakeholders in the case company to ensure its practical applicable outcome. It also helped to mitigate potential weaknesses regarding the researcher's potential bias as for the relevance of the topic and the selected approach.

Finally, logic in this study has been achieved defining the intellectual framework intended for developing the research's outcome, and aligning this to the general findings of the case being analyzed.

7.4 Closing Words

The environment in which logistics providers will continue to be disrupted by innovations in digitized solutions and changes in customer demands and behaviours. As a result, competition in this environment will progressively increase as new players enter the market and old players seek to grow their current market shares. Accordingly, having the basics in place is vital in service delivery. Companies should aim to ensure smooth delivery of processes enhanced by effective collaboration and communication within organizations as well as clear visibility into process performance. Ultimately, achieving high quality standards while offering shorter deliver lead times will ensure, in part, better customer acquisition, retention and satisfaction. The organization must, in effect, have structures that enhance collaboration towards a common goal.

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