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Proposal for best practices for cross-functional collaboration

Metropolia University of Applied Sciences

Master of Engineering

Industrial Management

Master’s Thesis

26 April 2022

What a journey this has been! Taking on studies and a new position in the middle of a global pandemic has been nerve wrecking and inspiring, and I have learnt so much professionally and about my own capabilities. This thesis work has thought me research skills, organisation skills, skills to cooperate, a whole lot of knowledge on collaboration and to trust myself.

I want to take this opportunity to thank the case company for the opportunity to attend to this program, learn and improve my work in my new position. It has been a privilege. I want to thank all the stakeholders, interviewees, workshop participants and everyone else who has contributed and supported me. Especially I want to thank my supervisor Mr. Tero Viitanen for supporting me during my thesis work and encouraging me to believe that the direction I steered the thesis to was right.

I want to thank Dr. James Collins for the guidance throughout the thesis work. His expertise and passion are inspiring. Thank you M.A. Sonja Holappa for the guidance for the writing. I also want to thank Dr. Thomas Rohweder and Dr. Juha Haimala for your excellent lectures. It will be a great loss when the three of you retire! Finally, I want to thank my peer students for the support and the great atmosphere you created.

Thank you Ossi for being there for me, thank you Jossu, and thank you Seinähumala crew for making sure I get off the laptop and go climbing every once in a while.

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April 26, 2022

Abstract

Author:	Heidi Raivio
Title:	Proposal for best practices for cross-functional collaboration
Number of Pages:	78 pages + 1 appendices
Date:	26 April 2022
Degree:	Master of Engineering
Degree Programme:	Industrial management
Professional Major:	Service management
Supervisors:	Dr. James Collins, Senior Lecturer M.A. Sonja Holappa, Senior Lecturer

The objective of the study was to propose best practices for cross-functional collaboration for the case company. The case company has recognised a disconnect in collaboration between teams. The Covid-19 pandemic years and the increasing demands from customers has made the disconnect more evident and the case company is determined to improve its operation.

Design research using a qualitative method was chosen as the research approach for this study because the approach supported the nature of the study. The study was conducted in four stages. The first stage was a current state analysis to collect data and gain understanding of the current situation and find the strengths and weaknesses. Chosen weaknesses were utilised in the second stage together with knowledge from relevant literature to create a conceptual framework. In the third stage an initial proposal, based on the outcomes from the previous stages was co-created together with stakeholders. The fourth and final stage of the study was a validation stage where senior management provided feedback to the initial proposal. The initial proposal was adjusted according to the feedback to form the final proposal.

The weaknesses found in the current state analysis concerned the entire company as many of them were related to a siloed structure in the case company. The weaknesses were categorised according to a structure found from literature to be able to target all necessary areas in the case company. The same categories: Values, Leadership, Roles, rewarding and development, Collaborative factors, and Environmental factors were used in the proposal.

The outcome of this study, the final recommendations provide a set of practical actions to improve cross-functional collaboration in the case company. When implemented, they will rise the feeling of community amongst employees and enable and encourage collaboration.

Keywords: collaboration, cross-functional collaboration, silos, silo-busting, bridging silos

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Appendix 1: Sisäinen yhteistyö

List of Abbreviations

KPI:	Key performance indicator
CIC:	Customer Interaction Centre
CS:	Customer Solutions
PMM&S:	Product Market Management and Support
CRM:	Customer Relationship Management

1 Introduction

In the long history of humankind those who learned to collaborate and improve most effectively have prevailed. (Charles Darwin)

In today's business world it is rarely a possibility to not be a team player. The demand for profitability has decreased the number of employees compared to the workload given to a team or an individual. At the same time peoples' skills and knowledge have become more specific and tasks are centralised to small groups of experts. To be successful it is a must to collaborate.

Collaboration does however not come by chance. A collaborative atmosphere and work culture is built from the management down. In collaborative workplaces people are encouraged to apply their unique talents to group projects. People are also encouraged to see the big picture and become motivated by a collective mission instead of merely personal gain. Collaboration is also valued and rewarded. (Adler et al., 2011)

The case company has realised that good cross-functional collaboration will make the company both more successful and a better workplace where people like to work, learn, and stay and thus be as productive employees as possible. That is why it is a focus area to create a more collaborative community in the company.

1.1 Business context

The case company is an international, family-owned company with headquarters in Germany. It operates within three (3) business areas: pneumatic automation, electric automation, and process automation. The core business is selling components such as valves, valve terminals, electric drives, axis, process valves and actuators to machine builders in factory automation. In addition, the case company has a Customer Solutions department that is

specialised in designing and selling customised solutions such as small assemblies, pneumatic cabinets, and gantries. A portion of the customised products are assembled at the production unit of the case company in Finland.

The cross-functional communication and collaboration has never been easy but everyone moving to their home offices due to the Covid-19 pandemic has made communication even more challenging and a lack of structure is more evident. The global lack of components and raw materials that has led to delivery issues for basically every company in all sorts of businesses has added to the problem. At the same time the customers’ demands have increased and made tasks require more cross-functional collaboration than ever. The management of the case company has realised that there is a clear disconnect in cross-functional collaboration. Most often the disconnect does not lead to any big issues and the problems can be easily solved but in worst cases it leads to the level of customer service being poor and response times being too long or even worse, nobody answering to the customer at all. Sometimes it also leads to resources not being focused where they should be.

1.2 Business Challenge, Objective and Outcome

Even before the pandemic it was apparent that there was a disconnect in the cross-functional collaboration and communication between sales and back office but especially the current global market situation has made this disconnect more evident.

The organisation is divided into two large parts: Sales and Operations. Operations has only recently been positioned directly under the Country manager thus making it a direct part of sales. In the past Operations was not directly linked to the sales teams in the organisation chart that is presented in Figure 1.

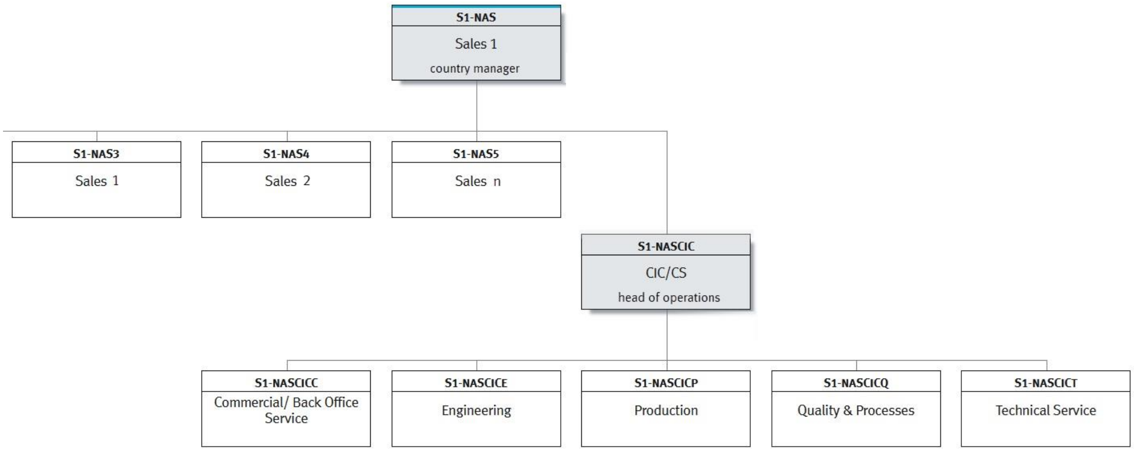

Figure 1 Simplified organisation chart

As shown in Figure 1, the simplified organisation chart consists of sales teams and CIC/CS which is also called Operations. The sales teams include sales engineers, technical support, and product managers. The operations team is the back-office services including Commercial Service, Technical Service and Customer Solutions that is engineering and production combined. Commercial Service and Technical Service combined are called the Customer Interaction Centre, which is the first point of contact for the customer if they call the case company.

In addition to serving the customers the target of the Operations team is to help and serve the sales team. To be able to do that well the CIC officers and CS engineers need to understand what sales is expecting from them and sales need to know what is possible to achieve and naturally the teams need to communicate in a way that all understand. Accordingly, the **objective** of this thesis is to propose best practices for cross-functional collaboration. The **outcome** is best practices that the case company can apply to the daily work to structure the cross-functional collaboration.

1.3 Scope and Outline

The scope of this thesis contains the internal collaboration and communication of the case company in Finland. It targets especially the cross-functional

collaboration but does naturally also include some internal collaboration of teams. The thesis discusses only solutions that can be applied without making any major changes to the current organisation such as changing the organisation structure or changing any tasks or processes of teams.

The thesis is written into seven chapters. The first chapter is the introduction and the second chapter is the presentation of the project plan. The third chapter contains the analysis of the current state of cross-functional collaboration. The fourth chapter explores relevant literature for the weaknesses identified and outlines a conceptual framework. In the fifth chapter an initial proposal for best practices for cross-functional collaboration is created and in the sixth chapter the proposal is validated and a final concept of best practices for cross-functional collaboration is created. The seventh and final chapter contains the conclusions and a self-evaluation of the thesis credibility.

This is the end of the introduction. The next section presents the project plan.

2 Project plan

In the first chapter a short introduction to this thesis was given. The introduction provided context, set out the business challenge and described the thesis objective. This chapter first gives a short description of the chosen research approach and then goes on to present the research design and data collection plan.

2.1 Research approach

According to Saunders et al. (2019:6-7) business and management research can be defined as using a systematic way to find things out about business and management. One important aspect of business research is that it should be relevant to and have the potential to impact or have a practical consequence on the business. Therefore, the research should combine theory and practice to produce practical solutions that are based on known theoretical data.

The context and purpose of business research vary greatly. The research might be aimed at refining a chosen process in one company, it can be a comparison of how something is done in several companies in the same business area, or it can be something else. Despite the variety Saunders et al. (2019:9-10) believe that all these research projects can be placed on a continuum according to their purpose and context. At one end of the continuum are research projects that are done only to understand the processes of business and management and their outcomes. The key impact of such research is in the academic community, and it has little impact on practice. This kind of research is called basic or fundamental research. At the other end of the continuum is research that is of importance to businesses and aims to have a practical impact and provide tools that can be used in businesses. This kind of research is called applied research.

In order to be able to answer the research questions and thus meet the objectives of the research the choice of research strategy is important. Even though Saunders et al. (2019:189-190) state that one should not try and label

strategies or link research elements just for the sake of linking to make the research appear methodological it is important to make a justifiable choice to achieve a reasonable level of coherence throughout the research design. The choice of research approach must be grounded in the research question and objectives but is also affected by parameters such as extent of existing knowledge and the amount of time and resources available.

According to Kananen (2013:20-21) design research produces functional and practical solutions by combining research and development. It is close to the normal development work done in organisations, but design research and normal development work differ on the aspect that behind design research there is always one or more theories on which the development is based. Development work can be considered as science when it is documented using scientific methods i.e. methods that produce real and reliable knowledge.

For this study the selected research approach is design research, and the research method is qualitative. This approach was selected as the most suitable approach because the topic of this study is a real-life business problem in a specific company, and the objective is to create recommendations to only that specific business problem. Design research was chosen also due to time limitations of this study. The objective was to create recommendations and validate them but not do iteration rounds. A qualitative research method was selected to gain in depth information of the business problem that is poorly known. It was more important to learn about people’s experiences than collect a large amount of numeric data.

2.2 Research design

This study was conducted in four sequential stages. The motive for the study was the business challenge and the negative impact it was having on working efficiency, collaboration, and customer care in the case company. The research design is presented in Figure 2.

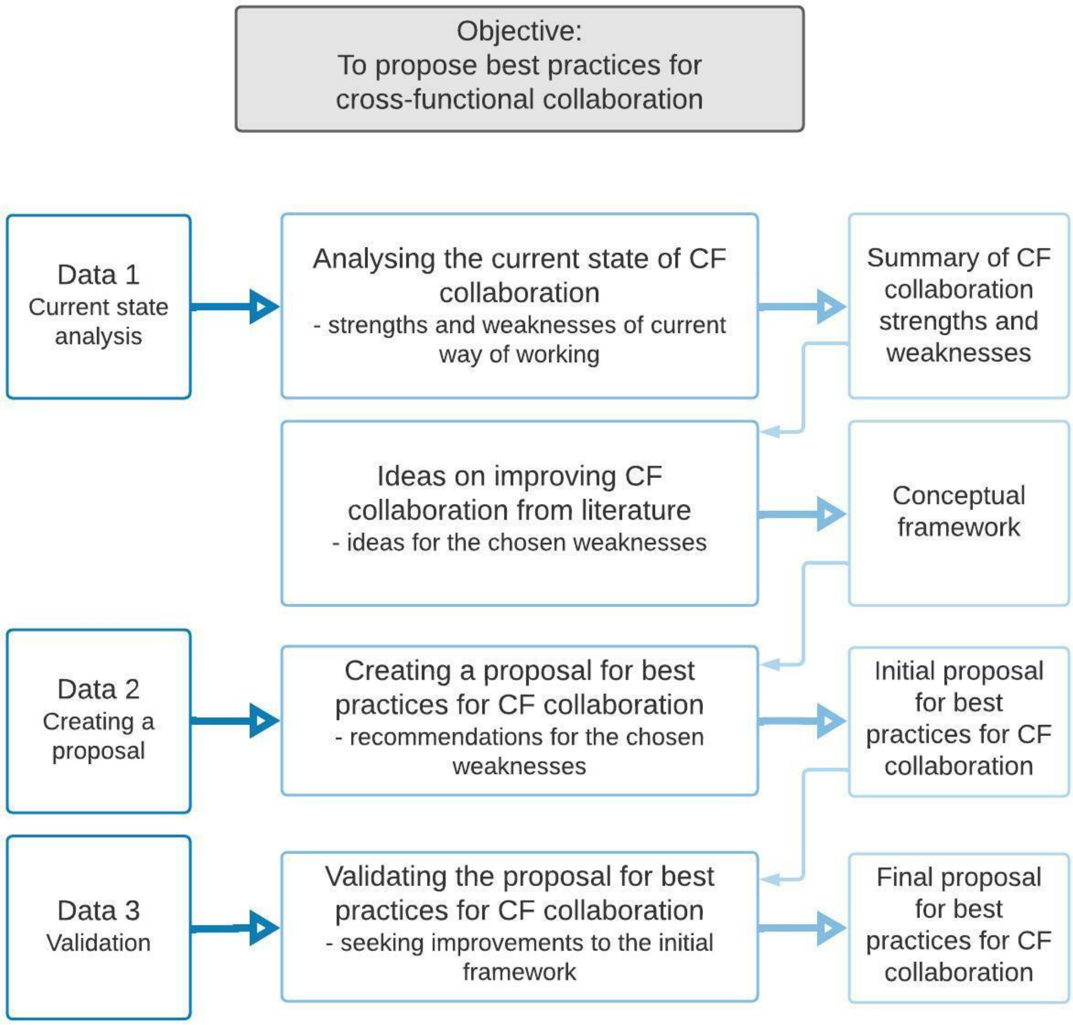

Figure 2 Research design of this study

As shown in Figure 2, the study began by analysing the current state of cross-functional collaboration and communication in the case company. This stage was important to get an understanding of the pain points of cross-functional collaboration but also to understand what was already done well. The stage was started by mapping the different phases in the sales cycle where cross-functional collaboration occurs, the types of communication used and the persons that might be involved in the collaboration. Then a series of one-to-one interviews was conducted with stakeholders from both management and employees. The outcome of the interviews was analysed and together with

stakeholders from management level the most important weaknesses were chosen for the next stages of the study.

In the second stage of the study the weaknesses were analysed deeper and improvement ideas were searched for from academic literature and currently known best practices. The target of the second stage was to create a conceptual framework to be used in the third stage of the study. As shown in Figure 2, the third stage of the study was to create an initial proposal for best practices for cross-functional collaboration. The proposal targeted the weaknesses found in stage one and chosen together with stakeholders from management level as the most important ones for improving cross-functional collaboration and effectiveness. The proposal contains improvement ideas for each of the chosen weaknesses. To create a proposal that would be sensible and applicable it was created in two workshops and one interview followed by a final workshop where the ideas from the previous workshops were put together.

The fourth and final stage of this study was a validation stage. The purpose of this stage was to gain acceptance from the management of the case company and to seek improvement ideas to the initial proposal. Constructive feedback was received from interviews and the feedback was used to adjust the initial proposal accordingly. The outcome of the fourth stage was the final proposal for best practices for cross-functional collaboration.

2.3 Data collection plan

This study drew its data from several informants including sales managers, salespersons, the Head of operations and Customer Interaction Centre officers. The information was gained in one-to-one interviews and workshops. The collected data is in the form of field notes, interview recordings and workshop notes. The overview of the data collected in the three data stages can be found in Table 1.

Table 1 Data collection table

Data round	*Data type*	*Informant*	*Timing*	*Documented*	*Outcome*
Data 1 Analysing the current state of CF collaboration	One-to-one interview	Sales manager 1	19.1.2022, 10:30-11:30 Teams	field notes and recording	Summary of cross-functional collaboration strengths and weaknesses
	One-to-one interview	Head of operations	19.1.2022, 14:30-15:20 Teams	field notes and recording	
	One-to-one interview	Sales 1	21.1.2021, 10:00-11:00 Teams	field notes and recording	
	One-to-one interview	Sales manager 2	24.1.2022, 10:30-11:30 Teams	field notes and recording	
	One-to-one interview	Head of Customer Solutions	24.1.2022, 15:00-16:00 Teams	field notes and recording	
	One-to-one interview	Customer interaction Centre officer 1	26.1.2022, 10:00-11:00 Teams	field notes and recording	
	One-to-one interview	Customer interaction Centre officer 2	26.1.2022, 14:00-15:00 Teams	field notes and recording	
	One-to-one interview	Sales 2	31.1.2022, 10:00-11:00 Teams	field notes and recording	
	One-to-one interview	Sales 3	31.1.2022, 13:00-14:00 Teams	field notes and recording	
	internal document	internal sharepoint page	accessed 27.1.2022	sisäinen yhteistyö.pdf	
Data 2 Creating a proposal for best practices for CF collaboration	Workshop	Sales 1, Sales 4, Customer interaction centre officer 1&2, technical support 1	23.3.2022, 13:00-14:40 Teams	field notes	Initial proposal for best practices for cross-functional collaborationn
	Workshop	Sales manager 1&2 Head of operations Head of customer solutions	25.3.2022, 10:00-11:50 Teams	field notes	
	One-to-one interview	Sales 3	29.3.2022, 09:00-10:00 Teams	field notes	
	Workshop	Head of operations, Customer interaction centre officer 2	30.3.2022, 14:00-15:15 face-to-face	field notes	
Data 3 Validating the proposal for best practices for CF collaboration	One-to-one interview	HR operative	4.4.2022, 14:00-15:05 face-to-face	field notes	Final proposal for best practices for cross-functional collaboration
	One-to-one interview	Country manager	6.4.2022, 10:00-11:35 face-to-face	field notes	

As seen in Table 1, the Data 1 stage was conducted as a series of interviews with a large selection of interviewees. The interviewees represent all departments of the case company closely related to sales and include representants both from managers and employees. It was important to interview many people to gain full understanding of the current state of cross-functional collaboration including all possible weaknesses and strengths of collaboration

and communication. Due to Covid-19 restrictions and recommendations to avoid contact the interviews were held in Teams. The Teams sessions were recorded, and field notes were taken during the interviews.

In the second data stage two workshops were organised via Teams followed by one interview and a final workshop to co-create the initial proposal. In workshop 1 the attendees represented employees and in workshop 2 the attendees represented managers. In the workshops and one interview a baseline for the proposal for best practices cross-functional collaboration was created. The proposal was then complemented by the last workshop. In the last workshop a summary of both workshops and interview served as a baseline for the discussion. The data collected from the workshops and interviews is in the form of notes.

The third and final data stage was conducted as two one-to-one interviews. The purpose of the interviews was to receive feedback for the initial proposal for the proposal for best practices for cross-functional collaboration. The interviews were held face to face and the data collected is in the form of field notes.

As presented in section 2.1 Research design, the data was collected using qualitative approaches via interviews and workshops, collecting the stakeholders’ views, opinions, and experiences. The data was analysed through thematic content analysis – an approach that seeks to find themes or patterns that represent important ideas in the data. These themes are useful because they provide focus areas for example from the current state analysis to be used in the literature search.

This completes the presentation of the project plan. The next section presents the first data stage as the findings of the current state and an analysis of the cross-functional collaboration in the case company.

3 Analysing the current state of cross-functional collaboration

The previous chapter describes how data was collected for this study. This chapter describes the current state of cross-functional collaboration in the case company. After an overview of the current state of cross-functional collaboration this chapter proceeds to discuss the strengths and weaknesses found in the current state analysis. Finally, this chapter explains which weaknesses were chosen for further analysis and provide an explanation to why those were chosen.

3.1 Overview of the current state analysis

The objective of the current state analysis was to gain information about the communication flow across teams and the collaboration across teams. Further the purpose of this stage of the study was to find the strengths and weaknesses of cross-functional collaboration to find out where the disconnect appears.

In the first phase the ways of communication were analysed and listed to gain an understanding of how communication is carried out in the case company and to see where tasks are transferred between teams. The information flow was mapped in a simple image. Based on this data a series of one-to-one interviews was conducted in phase two to gain knowledge of the cross-functional collaboration and communication status. Since the purpose of this study was not to describe collaboration as a process but rather as events that occur constantly it was not appropriate to design a process description.

The first phase was conducted by the author and confirmed by the interviewees in the one-to-one interviews conducted in phase two. The confirmation was done in two different ways. The first method was to show the ready-made image of the communication types and flow and the second method was to ask the interviewee to explain in their own words in what ways internal communication was done.

The second phase was conducted in a series of one-to-one interviews with stakeholders from all relevant teams. The interviewees were part of one of the following teams: Team leader, Technical officer in the Customer Interaction Centre, Commercial officer in the Customer Interaction Centre, Customer Solution or Sales. All of the interviews were semi-structured interviews where the starting point was the same, i.e. the way communication and especially cross-functional collaboration and communication is carried out. After determining the means of communication the interviews focused on discussing the different types of communication, their strengths and weaknesses, and other observations of cross-functional collaboration that the interviewee might have.

3.2 Description and illustration of cross-functional collaboration

Communication or collaboration are not processes, but a compound of events that occur constantly. A part or specific type of collaboration that occur in a specific location could be mapped as a process but that is not the purpose of this study, therefore collaboration is not mapped as a process. However, to find the disconnect in cross-functional collaboration an image was drawn to have an overview of the types of communication and the communication flow at a very superficial level. This image is presented in Figure 3 Communication types and flow.

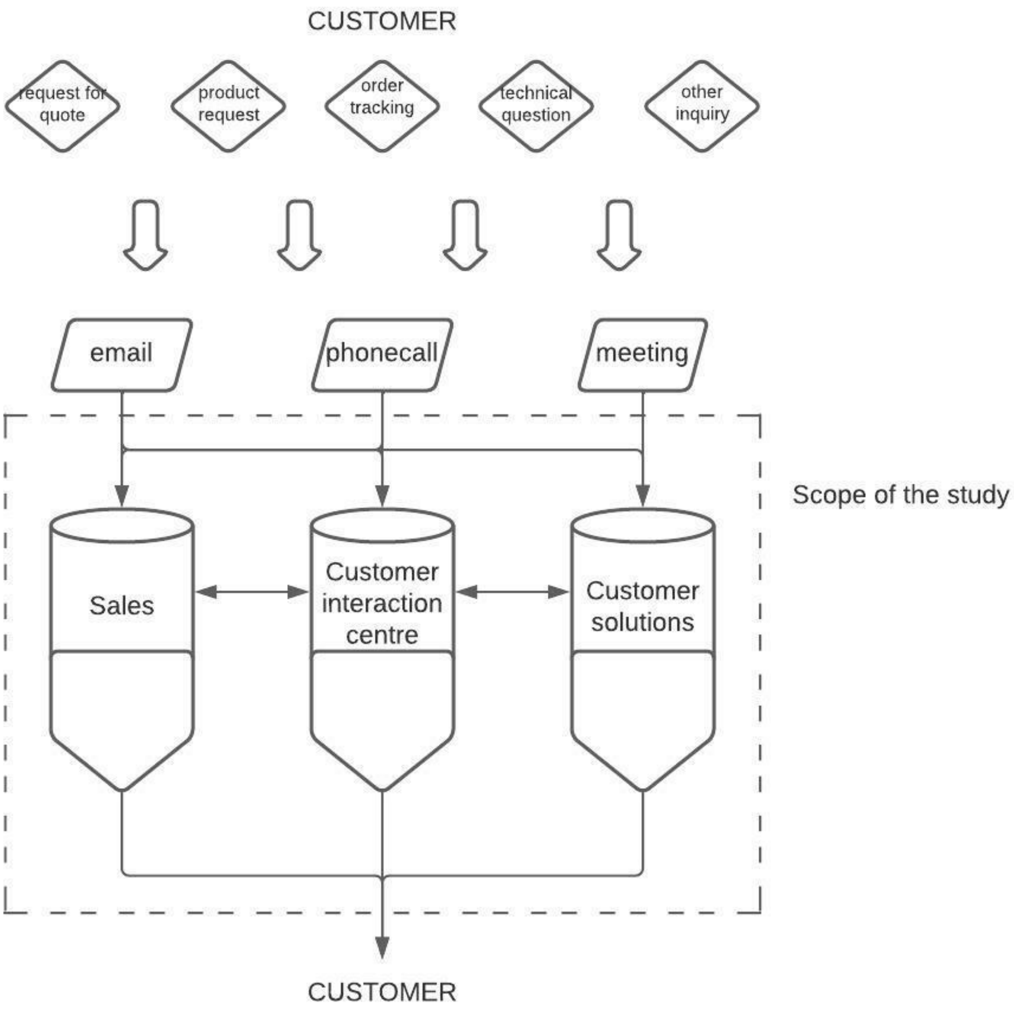

Figure 3 Communication types and flow

As can be seen in Figure 3, the customer is at both ends of the internal and cross-functional communication. The case company is a sales company and therefore everything that is done has to do with the customers. All communication is triggered directly by the customer whether it be a new project or after sales activities including for example order tracking or requests to help with service of a product. Consequently, the outcome of the internal communication is sent out to the customer. Collaboration appears when a task from a customer is handled in the different teams of the case company.

3.2.1 Description of the work in different teams

The different teams have different types of tasks and responsibilities and consequently also different KPI’s. In addition to the daily work this also affects the way people in different teams use different communication methods. The sales team members who are used to communicating mostly by phone and meetings prefer those and people in the back-office team tend to prefer email. The preference for back-office seem natural since the case company has had a strong policy to try and channel incoming requests to common mailboxes.

The main task and KPI for the sales team is sales. That includes making sure old customers are content and keep buying and finding new potential that can be turned to sales in both old and new customers. Most of the sales engineer’s time should be spent with the customers and a small part should be spent on quotations and passing on tasks to other people in the organisation in order to get help from them on projects and quotations.

The Customer Interaction Centre is divided in two parts, Commercial Service, and Technical Service. The Commercial Service team is responsible for all topics related to commercial matters i.e. order entry, order tracking, planning according to customer forecasts and so on. The Technical Service team is responsible for first level technical support and product requests. In complicated cases they forward the request to the specialists in the Product Market Management and Support team, PMM&S. CIC has a service level requirement which means that one of the team’s main KPI’s is how fast they respond to incoming requests.

The Customer Solutions team is responsible for design of products that are not found in the case company catalogue. Normally these are small assemblies consisting of a few parts, pneumatic cabinets, and gantries for electric automation. This team only serves the case company’s biggest and most important customers and therefore it does not have the same kind of KPI’s than CIC. The service level regarding response times is measured but the inquiries

are often linked to bigger and lengthier projects at the customer side. As a project engineer it is more important to gather all necessary data to be able to produce as good a solution as possible for the customer.

3.2.2 Description of the main ways of communication

The ways of communication considered in this study are email, phone calls (Skype calls) and meetings. The case company is using both individual emails for all employees and additionally there is a common email for Customer Interaction Centre and one for Customer Solutions. That means that all back-office employees have several emails they are using and are responsible for.

Most of the cross-functional communication in the case company takes place via email. The information flow is so massive that email is the only way to handle all communication. The company policy is to try and use the common mailboxes for the majority of requests, this counts also for the most part of cross-functional requests. This policy ensures that no one person is overloaded with requests and that all requests are answered within a timely manner. Even though the common mailboxes are a good and efficient way of handling the workload and making sure that as few requests as possible are one person's responsibility they are also considered having drawbacks. One of the major drawbacks is that these common mailboxes are considered faceless and there is no confirmation sent to the sender of the request about who and when the request is going to be handled. This creates mistrust towards the common mailboxes. Many of the interviewees shared the opinion that tasks in the common mailboxes are generally handled well but employees are less likely to take real responsibility of the request and instead try and solve the requests as fast as possible to be able to move on to the next task. It was also seen that no real collaboration is done when operating only via email.

Phone calls are generally used in urgent cases where an answer is needed right away. They are in addition to meetings considered to be the best way to handle real two-way communication. The biggest difference to email is that

during phone calls it is easy to confirm that everything has been understood and to clarify unclear details. As one interviewee said:

A 10 second call can make up for 10 emails. (Sales 2)

Unfortunately, all interviewees agreed that people are sending too many emails in unclear matters instead of making that one call.

Meetings are arranged when a sales project requires cross-functional activities or even more commonly when a bigger project starts, and it is necessary to go through the details of the project and requirements with the people involved. If a project lasts long also follow-up meetings are held to keep everyone up to date. The case company is also experimenting with team-selling and these teams have regular meetings to go through current topics and to-dos related to a specific customer. The team-selling teams are however quite inactive and meetings are far apart.

3.2.3 Description of points of collaboration

Cross-functional collaboration is needed in many different stages of a sales process. The first stage might be when a new project is found by the sales engineer and there is a need to scope the project together with the customer. If there are many technical details to be covered or the project requires engineering the scoping requires the involvement of one of the specialists in the case company. In large projects this stage is in addition to general project management the most important point for cross-functional collaboration. In large projects that last a longer time project management is as mentioned another important point of collaboration. The project process needs to be tracked and information received from different teams. Members of different teams need to collaborate to time different stages of the project, for example production and deliveries, correctly.

Even smaller projects often require collaboration. Requests might not be sent directly to the sales engineer and people in the back-office teams need to

collaborate with the sales engineer to make sure the request has been sufficiently handled and that no hidden potential is lost. This stage might as well need collaboration between the different back-office teams to be able to cover the customer request that might include both catalogue products and special engineering products. Finally, it is common that the order process requires collaboration either confirming prices and products or after the order is saved and the order monitoring stage begins and there is a need to for example advance deliveries or simply communicate confirmed delivery times that are not according to the customer request.

3.2.4 Company guidelines for cross-functional collaboration

The case company does not organise trainings in specifically communication and collaboration. The introduction when an employee starts working at the case company includes going through company policies and guidelines including a short presentation to the agreed ways for internal collaboration. The employees do also get task specific training and sales training and the sales training includes some communication training. Other teams can be considered as internal customers thus the learnings from sales training are useful in internal interaction as well. It is however up to each employee to apply the learnings from a customer focus to a co-worker focus. The analysis did reveal that since no time and focus is put into the communication inside the case company, communication is highly dependent on each employee.

The case company has one document on internal collaboration. The document is shown in Appendix 1. The document is a one-pager called Internal collaboration – How to improve common understanding. The guidelines are divided into with five topics. The topics and guidance given for these topics are the following (free translation from Finnish):

Order of importance and flexibility

- I understand what is important for the company and the customer.
- I take into consideration and understand the situation of my colleague when I tell my matter.
- I use discretion and I am flexible.

The customer

- I understand that I'm here for our customers.
- I also remember the internal customers and the importance of collaboration.

Sharing and seeking information

- I am self-imposed and seek information. I ask if I don't know.
- I share information actively to others.

Interaction – communication

- Email versus verbal interaction.
- I answer the questions posed to me and on my part ensure answers are received.
- I make known the desired time schedule.

Good ways of acting

- I take care of general tidiness and order.
- I remember the rules of good meeting practices.
- I act according to agreed ways of behaviour and processes.

The document provides good advice, and it has been co-created with all employees hence it can be interpreted that the employees stand behind the statements and are willing to act accordingly. The weaknesses that were found

in the interviews did reveal, that not all of the practices promoted in the document were remembered and used in daily interactions.

3.3 Strengths in cross-functional collaboration

The interviews revealed that the overall view among employees is that cross-functional collaboration and communication is on a good level. Not surprisingly, the strengths are in the 2-way communication. When people are in direct contact with each other it is easy to explain what is meant, what the desired outcome is and what is expected of the other party. Subsequently, it is easy to ask more questions, clarify and explain what can be done to reach the desired outcome.

The summarised strengths found in the analysis of the current state of cross-functional collaboration can be found in Table 2 Strengths in cross-functional collaboration.

Table 2 Strengths in cross-functional collaboration

Strengths	
communication	Communication via phone or meetings is good and people take responsibility of the tasks given.
ways of working	Project engineer's and technical support's way of contacting sales when they start working on an inquiry is good.
	Email is easy to put on your to-do list / confirm what was discussed on the phone.

As can be seen in Table 2, all matters listed as strengths are connected to direct communication between people. It is seen that when people talk to each other the level of collaboration is good. Direct communication also engages people to the tasks in question. It can be interpreted from the interviews that talking with people lower the boundaries between teams and make people more committed. It is easier to make the respondent want to do a little extra when a task is given over the phone or in a meeting. It is also easier to overcome the differences in work tasks and targets and gain a mutual understanding of the

message communicated and the tasks given. One interviewee who was mistrusting emails especially when sent to the common mailboxes put it as follows:

> *When calling you make sure that someone is really handling your case. (Sales 1)*

The same can be seen in the second item on the list. It is considered as good communication when a project engineer or a technical support person contacts the person who made an inquiry when they start working on it. This was found to be helpful to make sure the task is understood and clarify all unclear points before starting.

Even though email was generally considered as bad communication all interviewees agreed that also email has its place in good communication and when used right it can be considered a strength. The major strength of email was considered to be the ability to document what was talked and agreed when speaking. When sent as a confirmation email could be then added to a to-do list or kept as a reminder of what still remained to be done. Email was also considered to be superior to calling when simple tasks were transferred.

3.4 Weaknesses in cross-functional collaboration

A total of 22 different weaknesses were found in the analysis of the current state of cross-functional collaboration. The weaknesses range from matters like email practices to knowledge sharing and understanding the tasks of others to matters such as silos in the organisation and what the new management is not relating to the employees about the importance of working together.

It is evident that the Covid-19 pandemic has had a major impact on both communication and collaboration in the case company. Not all changes that moving to home office brought about were negative, but it seems that many of the weaknesses have become clearer and more visible in the day-to-day work across the whole organisation. This was also mentioned by many of the interviewees and can be concluded in what one of the interviewees said:

Communication has gotten worse during Covid. (Sales 3)

As collaboration is based on personal relations and people knowing each other and thus being more willing to help each other it seems that what was difficult before the pandemic has gotten more difficult and even though people are communicating with each other every day it is easier to turn to uncollaborative patterns of behaviour when people are not at the office.

The weaknesses found in the analysis of the current state of cross-functional communication can be found in Table 3 Weaknesses in cross-functional collaboration.

Table 3 Weaknesses in cross-functional collaboration

Weaknesses	
tools	Communicating "in the system" (info, inquiry, email in general) is bad.
	When cic calls by phone there is no info about who called.
	The tools teams/skype/phone system are not synced.
	Common mailboxes are impersonal, the tasks don't get one responsible person and no status updates are sent.
	It's difficult to know what communication tool to use and when.
email practices	Emails to several people / common mailboxes lead to several people working on the same task simultaneously or to nobody doing anything.
	Emails are expected to get replys fast and if that does not happen the same task is forwarded to the next people.
	Too complex emails are sent and misunderstood when the matter should be solved by calling.
	Emails with no recap of what is wanted and with all necessary info are sent.
	People try and solve tasked given by email as fast as possible to be able to move on to the next task.
collaboration and silos	People don't know the responsibilities and targets of other teams and that creates misunderstandings and mistrust toward the processes of other teams.
	People don't participate in each other's meetings and events to learn about what the others are doing.
	Across teams people are not always speaking the same language.
	People play different games in different teams even though they should be doing the same thing.
	Knowlede sharing across teams is weak which leads to several people looking for the same information and doing the same things.
	Passing customer cases between teams, especially via the common emails because nobody takes the responsibility.
	The company as a company has changed but the way of doing things and the expectation what can and will be done and how has not changed.
	There is a history of compartmentalizing people's roles and what they should do and to clearly state that they should not cross the line of what is their responsibility.
	The organisation is siloed and there is a strong urge not to break the silos.
	The silos make people defend their own lot and point at others for mistakes.
management matters	Lack of clear documenting and information sharing from management side.
	The new management does not talk about internal communication and collaboration.

As shown in Table 3, the weaknesses were divided into four different categories: tools, email practices, collaboration and silos, and management matters. This division was made based on the type of different weaknesses that were mentioned in the interviews. The division helps understand and process the different types of weaknesses that the case company is facing in everyday collaboration and communication across teams.

3.4.1 Tools

The weaknesses related to tools were mostly related to the issue that once communication is turned electronic it becomes impersonal. It was seen that when people stop calling and try and communicate in the system the communication is bad. That was said especially about the common mailboxes. The biggest weakness seen in the common mailboxes was the fact that there is no way of seeing the status of the task passed to the mailbox nor does the email chain get one responsible person. When a task can be solved with one email it is not a problem but if solving the task requires several emails it is possible that several people in one team handle the case and often that leads to confusion and misunderstandings.

Further weaknesses related to tools were that the tools are not synchronised and there are many tools for the same function, for example Skype and Teams. Many interviewees also stated that it was difficult to know what communication tool should be used and when. This led to employees turning to the means of communication they felt most confident with, here oftentimes email even though a short phone call could have solved the matter at once. Critique was also passed on general communication tools and means. For example, outgoing calls from the Customer Interaction Centre are all anonymous which means that it is impossible for the recipient to know who called if they could not answer the call.

3.4.2 Email practices

Most interviewees viewed email and the common mailboxes as one of the biggest weaknesses in communication. This was not true for simple requests but with even slightly complex cases the communication seemed to fail easily. One interviewee said:

> *The common mailboxes kill communication. (Sales manager 2)*

A major weakness related to the common mailboxes but also email sending in general was linked to having multiple people in the “to” field of an email. This was considered leading to either many people working on the same task or nobody taking up the task.

Even though email was considered as a slow way of communication many of the interviewees stated that people were trying to use email as an ad-hoc tool. This leads to unrealistic expectations and consequently to situations where in too short a time of sending the first email the sender sends out the same task to another person or even to several people. The consequence of this is several people working on the same task without knowing of the others working on it. Tasks given by email were also seen by CIC officers as tasks that need to be solved as fast as possible. This was explained to be because of the large number of incoming tasks and therefore people have a feeling that they need to be able to solve as many tasks as possible to be able to handle them all. This was seen as an obstacle for collaboration because it makes people avoid calling and asking about the tasks sent by email.

The last group of weaknesses were linked to the complexity and understanding of emails. In general, it was seen that email was used to try and handle complex issues. The outcome of complex issues over email could be seen in a few different ways. The first one being that the recipient of the task will do something without completely knowing what was asked. The second outcome is that many emails are being sent back and forth to try and solve the issue with little success. One last weakness connected to the complexity of emails was

that long and complex email chains were passed on as a task without making a recap of the matter and clearly stating what the task is.

3.4.3 Collaboration and silos

Many of the weaknesses found analysing the current state of cross-functional collaboration were connected to the way the work in the organisation and teams is organised and strong boundaries existing around teams. A number of interviewees pointed out that it is not known well enough how other teams work, what their targets and responsibilities are, and that this information is not shared. One interviewee said that this was one big issue that created misunderstandings and mistrust between teams. Another interviewee said:

> *We play different games in different teams even though we are doing the same thing. (Sales manager 2)*

Regardless of the organisational structure being simple and having a low level of hierarchy as displayed in Figure 1, the analysis showed that the biggest organisational weakness was that the organisation is siloed. This was explained in different ways by the interviewees. Some of them referred to silos, some to foxholes and some to brick walls. As one interviewee said:

> *We have silos, sometimes we break them, but someone is always building a new one or protecting the old one. (Sales manager 1)*

Many of the interviewees in managerial positions pointed out that this behaviour of building brick walls between teams was a historical habit. It had been one step in developing the different operations in the company. One interviewee pointed out:

> *The operating environment including customer demands has changed a lot in the recent years but the case company has not been able to change its operation in the same pace. Many good changes have been made but an old mentality of how things used to be done has still stuck. (Head of operations)*

The siloed structure could also be seen as compartmentalising tasks and strong attitudes toward sticking to the given tasks and not crossing lines of

responsibility. Among the employees this was seen as a tendency to categorise task according to what was thought to be ones' own responsibility and what not and passing on the tasks that were not thought to belong to the own tasks

In addition, it was found that information was not shared well across teams. The lack of information sharing was found to cause situations where the same work was done several times. One interviewee phrased the issue like this:

> *Everyone is doing things on their own and with no communication several people end up looking for the same information or doing the same thing. (Sales 1)*

The disconnect in collaboration and information sharing was seen also in passing tasks across teams. It was seen that with bigger tasks involving people from different teams a person from each team would only focus on what was thought to be their responsibility, but nobody would take responsibility of the whole task. The problem was described by one interviewee as follows:

> *Our biggest weakness is passing customer cases between teams, especially via the common emails because it's faceless, we just toss things around and nobody takes responsibility. (Sales 3)*

3.4.4 Management

Weaknesses that affected cross-functional collaboration were also found on management level. The organisation has recently been merged to a Nordic organisation and in this merger gotten a new CEO. The former CEO of the case company stepped down and the company was assigned a new Country manager at the same time as the merger was finalised. The analysis showed that information sharing from the management side was insufficient. The analysis further revealed that during the Covid-19 pandemic no special attention had been focused on communication and collaboration from management side. With regards to the big changes in the working environment during the pandemic the lack of focus on cross-functional collaboration and communication can be considered as one attribute that has contributed to the collaboration growing worse.

3.5 Summary of key strengths and weaknesses in cross-functional collaboration

The current state analysis of cross-functional collaboration revealed some strengths and many weaknesses. Table 4 displays all the different strengths and weaknesses categorised. Weaknesses in categories Collaboration and silos and Management are taken for further examination in the literature review in stage 2 of this study. The strengths will be used in stage 3 for creating the initial proposal if applicable.

Table 4 Strengths and weaknesses

Strengths	
communication	Communication via phone or meetings is good and people take responsibility of the tasks given.
ways of working	Project engineer's and technical support's way of contacting sales when they start working on an inquiry is good.
	Email is easy to put on your to-do list / confirm what was discussed on the phone.
Weaknesses	
tools	Communicating "in the system" (info, inquiry, email in general) is bad.
	When cic calls by phone there is no info about who called.
	The tools teams/skype/phone system are not synced.
	Common mailboxes are impersonal, the tasks don't get one responsible person and no status updates are sent.
	It's difficult to know what communication tool to use and when.
email practices	Emails to several people / common mailboxes lead to several people working on the same task simultaneously or to nobody doing anything.
	Emails are expected to get replys fast and if that does not happen the same task is forwarded to the next people.
	Too complex emails are sent and misunderstood when the matter should be solved by calling.
	Emails with no recap of what is wanted and with all necessary info are sent.
	People try and solve tasked given by email as fast as possible to be able to move on to the next task.
collaboration and silos	People don't know the responsibilities and targets of other teams and that creates misunderstandings and mistrust toward the processes of other teams.
	People don't participate in each other's meetings and events to learn about what the others are doing.
	Across teams people are not always speaking the same language.
	People play different games in different teams even though they should be doing the same thing.
	Knowlede sharing across teams is weak which leads to several people looking for the same information and doing the same things.
	Passing customer cases between teams, especially via the common emails because nobody takes the responsibility.
	The company as a company has changed but the way of doing things and the expectation what can and will be done and how has not changed.
	There is a history of compartmentalizing people's roles and what they should do and to clearly state that they should not cross the line of what is their responsibility.
	The organisation is siloed and there is a strong urge not to break the silos.
	The silos make people defend their own lot and point at others for mistakes.
management matters	Lack of clear documenting and information sharing from management side.
	The new management does not talk about internal communication and collaboration.

Table 4 displays all the summarised strengths and weaknesses found in the current state analysis divided into six different categories. The weakness categories including Tools and Email practices are not taken into consideration in the next stage of this study. In the scope of this study, it is not possible to change the tools, therefore they are outside of the scope. Based on the current state analysis it is considered that many of the issues connected to email will be solved by solving the issues taken up for further examination. The root cause for the weaknesses related to email practices are not considered to be lack of knowledge of good email practices. Outside of the scope of this thesis it will however be considered if some rules for internal email sending are needed.

The weaknesses connected to collaboration and the siloed nature of the organisation were chosen for further examination. Further the weaknesses found in the management communication were chosen for further examination. It seems that these weaknesses are the main reason for the disconnect that can be seen in cross-functional collaboration and communication. The strengths related to communication by calling and speaking to people are used for the initial framework if applicable. The strengths related to email are excluded.

This completes the analysis of the current state of cross-functional collaboration. In the next section improvement ideas are searched for from academic literature and currently known best practices to specifically find improvement ideas for the weaknesses chosen for further examination.

4 Literature review for improving cross-functional collaboration

The previous chapter describes the current state of cross-functional collaboration in the case company. This chapter discusses best practices for overcoming silo mentality and improving cross-functional collaboration found in relevant literature. The focus is on finding solutions to the weaknesses found in the previous chapter.

This chapter begins by explaining what silos in a workplace are, how they affect collaboration and categorises the weaknesses according to themes found in the literature. The chapter then discusses each category, their meaning for the workplace and the methods for solving the issues concerning that category. Finally, the last part of this chapter summarises the most important knowledge of this study to a conceptual framework.

4.1 Silo mentality

Most companies are by design structured in some kind of silos, such as horizontal functions or vertical divisions. This is considered to be positive when it provides the companies a practical way to organise work and operate efficiently. In practice it means having teams or departments with different responsibilities for example human resources and sales. The structure becomes negative when it means that the structure creates silo mentality where departments do not want to exchange knowledge or information, which hinders cross-functional collaboration. (de Waal et al., 2019). An informational silo can thus be described as a group of employees or a team within an organisation that fails to communicate freely or effectively with other groups, including management (Agnes, 2016). In organisational psychology literature organisational silos have traditionally been viewed as conscious, rational, and objective entities but the effect of silo behaviour seems to relate also to behaviour happening below the surface in terms of its unconscious, irrational and symbolic meaning and implications and impact. This means that the silo

mentality is rooted deeper than just the structure of the organisation. (Cilliers & Greyvenstein, 2012).

Apart from the organisational structure, silos exist in the minds of employees. In the minds of them thinking alike the siloed thinking provides safety by keeping the others out. This thinking makes the silos act as barriers and fragment the organisation. It creates an “us and them” mentality which makes it difficult to cross team boundaries and can cause anxiety in employees when they have to attend meetings with other teams or with cross-functional teams. (Cilliers & Greyvenstein, 2012)

The negative effects of silo mentality are widespread. On managerial level it may lead to managers only focusing on the interests and results of their own team and forget about the agenda of the entire organisation. It may also cause personal conflicts and damaging politics that lead to turf wars or power struggles that become hindrances for collaboration. This creates lack of trust between employees and contributes to the “us against them“ feeling. (de Waal et al., 2019)

Only wanting to work with the own team affects the organisational performance negatively. Opportunities and solutions are missed because insight is not shared or passed on. (Fox, 2010). The lack of information sharing also causes opportunities of shared learning and innovation being lost as people ignore facts that do not support their view or simply foster a “not-invented-here” mentality. Siloed thinking can further lead to the misallocation of resources across teams and isolate pockets of excellence only to the use of one team. As a result, there will be inefficient matches of people and positions and it will be impossible for the organisation to become high performing because not enough teams profit from the ideas, experience and skills of other units and employees. (de Waal et al., 2019).

Inherently the organisational silos affect the motivation and morale of the employees. Since each silo has its own agenda, mixed messages about

priorities are given to the employees creating confusion and ambiguity that can lead to organisational dysfunction. Silos can be a common source for employee frustration because it delays the way things are getting done or seen through which is damaging to the motivation and engagement of employees who want to see their efforts make an impact or have an outcome. (de Waal et al., 2019)

The so-called silo busting techniques or ways to bridge silos and promote collaboration were often found to be divided into categories based on their nature or the part of the organisation that they are targeting. Some of the authors had selected only a few techniques to focus on and some had a broader view. None of the authors examined for this thesis had a specific tool or theory, just practices that are helpful. All however had similarities and the same practices were used for the same weaknesses.

For this thesis the silo-busting techniques were categorised combining the ideas found in literature. The categories were created in a comprehensive top-down model so that it is easy to see what part of the company each category is targeting. The techniques were selected to target specifically the weaknesses found in the current state analyses. That means that some generally recognised categories or techniques might have been left out as they were considered not relevant. The categories for best practices for cross-functional collaboration examined in this study are: Values, Leadership, Roles, rewarding and development, Collaborative factors, and Environmental factors.

4.2 Values

The practices in this section seek ways to bring people together from the highest facet. These practices aim to bring people and teams together by promoting collaboration as a common value in the organisation (de Waal et al., 2019). The values are the foundation on top of which all other measures are built. They should be the ultimate guiding light in building a collaborative workplace.

The first step is naturally to create values that support collaboration. But the values should not be verbiage on a poster or on the company Sharepoint page. As Adler et al. (2011) explains, it is not enough to make up values that support collaboration. Naturally the leaders must talk about the values, but they cannot be only pronouncements of the leaders. The values have to be made into something concrete. To make the values mean something and guide the work of all employees require work. The values need to be discussed and processed to find the true purpose of them. This way the values become something that points to the common goal of the company. They will be practical and constantly enriched in debates about concrete problems.

By having values that support collaboration i.e. a shared purpose, companies will work toward trust and organisational cohesion that is more robust than self-interest and more flexible than tradition. A strong shared purpose tells how the company is positioned in relation to competitors and partners and what key contributions toward customers will define its success. The values or the shared purpose is a description of what everybody in the organisation is trying to do, it should guide the efforts at all levels of the organisation. (Adler et al., 2011)

In addition to a shared purpose, it is important to promote a sense of unity, to give people that “us” feeling. This is often lost when companies grow bigger. People become independent workers and they lose contact with their colleagues as barriers are set up by the company. (Laurier, 2011). Fortunately, it is simple to take down these barriers. Both Laurier (2011) and Gratton & Erickson (2007) agree that finding ways for informal interaction is the key to supporting a sense of community. Some level of communal spirit can develop spontaneously but the companies play a critical role in cultivating it. The means to promote informal interaction range from sponsoring group events or activities such as sports clubs, women’s networks, book clubs etc. to involving people from different teams in change projects or event planning or organising small spontaneous and unofficial events like for example pop-quizzes at coffee breaks or celebrating events from the company history.

According to de Waal et al. (2019) all of the so-called silo busting techniques included in this thesis show a positive correlation with collaborative results. There were however two groups of factors that de Waal et al. (2019) found having a significantly bigger impact than the others. Values had the second highest score, only the people rewarding and development category had a higher impact on collaborative behaviour. Therefore, de Waal et al. (2019) concluded that promoting internal collaboration by making it a key value of the organisation and making sure to reward people of collaborative behaviour will surely have a positive outcome on collaborative behaviour.

4.3 Leadership

The practices in this section are pointed at the leaders in a company. The managers are according to Gratton & Erickson (2007) the people that on the most basic level determine the success of collaboration. They do it via their own philosophy and how it reflects on their actions. Collaboration will be successful when the managers invest in supporting social relationships, demonstrate collaborative behaviour themselves and create a culture where collaboration is valued. Newton (2014) even states that collaborative leaders are being identified as the fundamental differentiator in achieving strategic objectives.

Gratton & Erickson (2007) have found that the perceived behaviour of the leaders has a significant affect in determining how cooperative employees are willing to be. Especially in bigger organisations it can be a challenge to make the leaders collaboration visible but there are ways. If the managers know each other’s roles and teams well enough to be able to substitute for each other, that is one visible action. Joint projects and regular joint meetings are also good ways to display the collaboration. The collaborative nature of the managers behaviour will trickle down throughout the organisation and employees will learn that the best way to get things done is through informal networks.

In addition to actively collaborating, it is important that the leaders encourage employees to collaborate and create a network of contacts that will be helpful

for the employee. The time invested in unofficial networking will be paid back as the results of collaboration in the future. (Gratton & Erickson, 2007). The leaders should also promote a working ethic where employees are willing to go beyond their formal responsibilities to solve broader problems. This means promoting a culture where instead of focusing on individualism and the results of an individual, focus is put on the results of groups or other shared targets. (Adler et al., 2011). An important factor in making collaborative behaviour happen is making sure that the employees have the means to collaborate. The employees need to be given the authority and accountability to collaborate. (de Waal et al., 2019).

Employees should also be encouraged to be curious about other teams and ask questions about their thinking and practices. In addition, both leaders and employees will benefit from learning to see things from other teams or employees’ points of view. It is normal that people do not actively consider others’ points of view even though most people are capable of doing so. Here the leaders play a vital role, by learning it themselves and then encouraging employees to try and consider others’ points of view especially in difficult situations there will be less misunderstandings and more information sharing. (Edmondson et al., 2019)

The final practice in this category is for the leaders to create open information flows and share information about the status, goals, plans and results of the entire company but of all teams as well (de Waal et al., 2019). An open communication model will keep seeds of turfism from sprouting and can lead to information sharing (Stone, 2004).

4.4 Roles, rewarding and development

The practices in this category focus on ways to enable collaboration. Before employees will start collaborating and before any practical solutions make collaboration better the foundation needs to be created. The foundation will give employees the authority to make decision about their own work and

collaborative actions and teach the skills to communicate and collaborate well. The research of de Waal et al. (2019) revealed that people rewarding and development actions such as giving people the authority and accountability to act in a collaborative manner, providing them with training to develop collaborative and networking skills and visibly recognizing and rewarding collaboration had the biggest impact on collaborative results compared to any other practices.

The research of Gratton & Erickson (2007) has shown that collaboration increases when the roles of individuals are clearly defined and well understood. When the roles are clear, time and energy is not wasted on negotiating roles or protecting turf. As well Newton (2014) enhances the importance of having clear roles and responsibilities. She discusses especially managers and the successful collaboration at managerial level but based on other research the practice can be generalised to all personnel. Her statement is that managers who successfully collaborate and lead together have clarity of who is responsible for what. Newton (2014) also reminds that it is not sufficient to define the roles once, the roles and responsibilities need to be revisited from time to time and refined to match the changed environment.

In addition to knowing their roles and responsibilities, employees need skills for successful networking and collaboration. As people have different characters, some are more open and like to interact with people from to start with and some are not, and networking skills it cannot be assumed that people have the ability to collaborate. Employees need to be provided with sufficient training to further develop their networking and collaboration skills (de Waal et al., 2019). A number of skills play a significant role in employees' ability to collaborate. The most important skills are the skill to appreciate others, conversation skills, the skill to resolve conflicts productively and creatively, and program management. (Gratton & Erickson, 2007).

To make people feel that their efforts to collaborate are worth the time and energy put into doing so, they need to be rewarded. Operant conditioning

including positive reinforcement according to the theory of B.F. Skinner is a widely known method in animal training, but it is also applied to bringing up children. Positive reinforcement is not unfamiliar even in working life. It simply means that adding a reinforcing stimulus, a reward, to a desired action makes it more likely that that action or behaviour will occur again. Acknowledging others' contributions will go a long way and by adding visible recognition and rewarding collaborative behaviour it is a complete practice (Agnes, 2016; de Waal et al., 2019).

4.5 Collaborative factors

The practices in this category provide practical solutions to improving cross-functional collaboration. Traditionally organised companies with operations on a horizontal axis and teams on vertical exes are good at collaborating vertically but they are not good at encouraging horizontal collaboration. Therefore, they need practical tools to bridge the silos between horizontal teams.

There is evidence that relationships, personally knowing people, have a strong impact on bridging silos and improving collaboration. Once people are familiar with each other and know each other's capabilities and interests they will connect more easily when faced with a situation that requires collaboration. Informal networking opportunities such as joint coffee breaks, pizza Fridays and personnel events might sound trivial and unprofessional, but they work. Equally important are joint training programs or other cross-functional trainings that bring together people that do not interact naturally. (Fox, 2010; Laurier, 2011; de Waal et al., 2019)

Giving people joint initiatives or projects to work on is another effective practice to improve collaboration. Many organisations can find cross-functional projects or goals and creating cross-functional teams to work on them will give excellent results. The same principle can be used by allocating resources on interests rather than positions. It does not mean that the traditional teams must be broken, it only means that individual expertise can be allocated also outside the

own team. In order to learn about the work of others and to share information about joint projects especially managers should be invited to other teams' meetings or be made members permanently or for a limited time. (Stone, 2004; Newton, 2013).

Taken one step further this practice means creating interdependent planning and review processes across organisational units. Especially leaders could have joint responsibilities and be accountable for parts of the results of other teams than their own. (Armajani, 2010; de Waal et al., 2019)

In addition to connecting people concretely, people should also be connected by IT and common virtual ground. Giving access to the status of all people in an organisation and making it easy to reach out to anybody is a good way to bridge silos. Unified communication systems provide companies the capability to enable one-click access to the entire organisation. (Rosen, 2010). The company intranet should also be used as interactively as possible. It could be used to share ideas, fix lunch dates and other informal thoughts. An employee profile page could be set up and updated regularly about facts from the personal lives of employees. Channels for asking technical questions from other experts inside the company are also a good concept. (Laurier, 2011).

IT is needed as well for the more formal interactions. A common IT platform and synchronised IT systems enables better information sharing across organisational units. Giving everybody access to the same data and information discourages information hoarding and reduces double work. (Rosen, 2010; de Waal et al., 2019)

4.6 Environmental factors

The practices in this category provide concrete ideas for ways to utilise the physical space that is available in a company. The aim is to provide ideas on creating workspaces that encourage and enable social interaction, both unofficial and work related.

The silos are typically visible in the architecture of office layouts. Each team has its own area where the workstations are placed. Sometimes the teams or departments are divided by building floors. This can create a situation where employees from different departments do not even see each other during the day. Having shared public areas such as coffee rooms or print areas are an easy way to lower the boundaries between teams. (Laurier, 2011)

Open-space architecture is another factor that breaks down silos. This does however not solve the issue of people from the same team sitting together. Physically sitting among people from different teams will. Companies should strive to enable that. Workstations can be made mobile or on a smaller scale every department could have a number of free workstations for anyone to use. Common workspaces with different grades of formality are also encouraged. Be it less formal meeting rooms or cosy areas with sofas encourage people to talk, share ideas and build relationships. Knowing what other departments do and learning to know the colleagues will keep the colleagues in mind for situations where one would benefit from their perspective. As in all of the practices also in the use of mobile workstations and common workspaces the example must be set by the leaders. The goal is to instil a culture that encourages collaboration. (Agnes, 2016; Armajani, 2010; Fox, 2010)

4.7 Conceptual framework

In this section the topics covered in the previous sections i.e. the improvement ideas for cross-functional collaboration found from relevant literature to help improve the weaknesses found in the current state analysis are summarised into a conceptual framework. Figure 4 depicts the conceptual framework showing the most important elements included in it.

Best practices for cross-functional collaboration	
Values	Create values that support collaboration. - de Waal et al. (2019) Create common goals that unite all teams. - de Waal et al. (2019), Adler et al. (2011) Promote a sense of community and unity. - de Waal et al. (2019), Laurier (2011), Gratton & Erickson (2007)
Leadership	Managers are role models in collaborative behaviour. - de Waal et al. (2019), Newton (2014), Gratton & Erickson (2007) Team-leaders must encourage collaborative behaviour and help people see things through others' eyes. - Edmondson et al. (2019), Gratton & Erickson (2007), Adler et al. (2011) Create open information flows about the roles, responsibilities, goals and plans of all organisational units. - Stone (2004), de Waal et al. (2019)
Roles, rewarding and development	Create clear roles and responsibilities for individuals and teams. - Newton (2014), Gratton & Erickson (2007), de Waal et al. (2019) Reward collaborative behaviour. - Newton (2010), Agnes (2016), de Waal et al. (2019), Adler et al. (2011) Provide employees with training to develop their collaborative and communication skills. - de Waal et al. (2019), Gratton & Erickson (2007), Agnes (2016)
Collaborative factors	Create customer-centric teams and bring people from different teams together to work on projects. - Stone (2004), de Waal et al. (2019), Laurier (2011) Create an interactive IT platform for information sharing across teams. - Rosen (2010), de Waal et al. (2019), Laurier (2011) Organize (informal) events that allow for making connections and bond across teams. - de Waal et al. (2019), Stone (2004), Fox (2010) Hold cross-functional trainings. - de Waal et al. (2019), Stone (2004)
Environmental factors	Encourage people to sit with other teams from time to time. - Agnes (2016), Laurier (2011) Create spaces for working together - Rosen (2010), de Waal et al. (2019)

Figure 4 Conceptual framework

As shown in Figure 4, the conceptual framework is divided into five categories following the categorisation made based on the different categories chosen from the current literature. The categories are organised in a top-down way starting from fundamental matters at the highest level of what drives a company to matters done at a managerial level and down to more practical solutions.

The categories linked with the weaknesses from the current state analysis are depicted in Figure 5.

Values	The new management does not talk about internal communication and collaboration. People play different games in different teams even though they should be doing the same thing.
Leadership	Lack of clear documenting and information sharing from management side. People don't know the responsibilities and targets of other teams and that creates misunderstandings and mistrust toward the processes of other teams. People don't participate in each other's meetings and events to learn about what others are doing. Across teams people are not always speaking the same language. The organisation is siloed and there is a strong urge not to break the silos. The silos make people defend their own lot and point at others for mistakes.
Roles, rewarding and development	People don't know the responsibilities and targets of other teams and that creates misunderstandings and mistrust toward the processes of other teams. There is a history of compartmentalising people's roles and what they should do and to clearly state that they should not cross the line of what is their responsibility. The organisation is siloed and there is a strong urge not to break the silos. The company as a company has changed but the way of doing things and the expectations what can and will be done and how has not changed.
Collaborative factors	Knowledge sharing across teams is weak which leads to several people looking for the same information and doing the same things. Passing customer cases between teams, especially via the common emails because nobody takes the responsibility. The organisation is siloed and there is a strong urge not to break the silos. People don't participate in each other's meetings and events to learn about what the others are doing.
Environmental factors	People don't participate in each other's meetings and events to learn what the others are doing. The organisation is siloed and there is a strong urge not the break the silos.

Figure 5 Categories and weaknesses

As shown in Figure 5, the weaknesses were divided into five categories. Some of the weaknesses were found to belong to one specific category. Other weaknesses were of a more general nature, and they were considered to belong to several categories. These weaknesses can be seen through the organisation hence, they need to be mended through the organisation.

The first category is Values. Making collaboration work starts by creating a set of values that support collaboration and creating common goals or a shared purpose to work towards. The values and common goals are then used in promoting a sense of community. This will be done from the leaders' side but both values and common goals must be discussed and adopted by all employees to give meaning to what they do every day.

The Leadership category models the actions of the leaders. The managers are the role models in collaborative behaviour, and they must show it both by their own actions, how they speak and how they coach and encourage their subordinates to take collaborative actions. The leaders in a company must also make sure to create open information flows about the ongoings in the company and just as importantly about the roles, responsibilities, and goals of all teams. Knowledge in opposition to keeping employees from information and thus creating insecurity will make employees feel safe and that enables them to cooperate with others.

The Roles, rewarding and development category suggest actions on employee level that enable and encourage the employees to collaborate. To be able to collaborate the employees need to be well aware of the roles and responsibilities of themselves and of their team. They need to be given adequate training to make sure that they have the skills to communicate and collaborate with others and finally collaborative behaviour must be rewarded.

The Collaborative factors category suggest concrete actions on how to get people to collaborate. Bringing people together in different ways is the key. From a productive perspective it is important to have customer-centric or project specific teams where the different specialists are brought together to work. From a networking perspective it is important to bring people together for trainings and informal events where they learn to know each other and the special knowledge and abilities of each other. IT platforms should be used to enable information sharing and interactive actions across teams.

In the Environmental factors category, the proposals are aimed at the floor plan and architecture in the office building. The architecture should allow people from different teams to sit together from time to time either by having mobile workstations or making people mobile and inviting them to sit at free workstations of other teams. The architecture should also include common working areas where people from different teams can meet and work together on projects.

The conceptual framework created in this section is used in the next section together with the findings from analysing the current state of cross-functional collaboration to create the initial proposal for best practices for cross-functional collaboration for the case company. The objective of the proposal is to find ways to bridge the disconnect in cross-functional collaboration between the sales team and the back-office team.

This completes the literature review section. In the next section an initial proposal for best practices for cross-functional collaboration is co-created together with stakeholders from the case company.

5 Creation of the initial proposal

The previous chapter reviews ideas from relevant literature for cross-functional collaboration. This chapter describes the initial proposal for best practices for cross-functional collaboration and the co-creation of the proposal by combining the findings from the current state analysis and conceptual framework together with stakeholders from the case company. The chapter first provides an overview of the stage. Then it presents the co-created initial recommendations. Finally, it gives a detailed description of the proposal building process.

5.1 Overview of the proposal building stage

The objective of the proposal building stage was to co-create an initial proposal for best practices for cross-functional collaboration. The aim was to combine the findings from the current state analysis and the literature phase to a set of comprehensive practices.

The proposal was created in three workshops and one stakeholder interview. In the first two workshops and the interview ideas were collected. The first workshops and the interview started with an introduction to the business problem, the objective, and the outcome of the study. After that the findings from the current state analysis and the findings from literature were presented. In all of these events all parts of the proposal were discussed but the focus of the discussion was a little bit different depending on the stakeholders in the workshop. The employees’ discussion was more focused on the practical suggestions and the managers’ discussion was more focused on the leadership topics.

After the introduction the discussion was steered to the improvement ideas for cross-functional collaboration. The themes from the conceptual framework were discussed one at a time trying to match the ideas to the weaknesses. The participants were in general active to take part in the conversation, give their

own ideas and discuss others' suggestions. All ideas were assessed and either put forward for the proposal or deleted.

In the final workshop the ideas were put together to a proposal. In this workshop there was only a short introduction reminding the participants of the objective and the discussion was quickly steered toward going through the suggestions from the previous workshops and refining them.

The stakeholders were chosen in a way that there would be a broad representation of the company. In the first workshop and the interview the stakeholders represented the employee level with participants from all teams including Sales, Customer Solutions, Customer Interaction Centre and Product Market Management and Support. In the second workshop the participants were from managerial level from the sales team and the Operations team. In the final workshop the attendees were narrowed down to one representative from the Customer Interaction Centre and the Head of Operations.

The first two workshops and the interview were organised via Teams to be able to gather all the stakeholders. The data was gathered as a summary of the suggestions and as field notes taken during the workshops. The final workshop was organized face-to-face at the office of the case company. The data was collected as field notes taken during the workshop and as the raw version of the initial proposal.

Finally, the initial proposal for cross-functional collaboration was created from the output of the last workshop. The proposal was categorised the same way as the conceptual framework. This was a more comprehensive way to make the proposal than to target each weakness on its own.

5.2 Illustration and description of the initial proposal

The initial proposal for cross-functional collaboration is a summary of comprehensive actions targeting the weaknesses found in the current state

analyses, created utilising the conceptual framework. The literature review revealed a structured way to organise the actions and therefore the proposal is categorised according to the categories presented in the conceptual framework. Figure 6 shows an illustration of the co-created initial proposal.

Initial proposal for best practices for cross-functional collaboration	
Values	The management will start talking about collaborative values in the Town Hall meetings 4 times / year. The collaborative values will be discussed in team meetings in 2022. Common goals will be set for members of team-selling teams. The cultural ambassador will be reactivated to start promoting community and team spirit via different events.
Leadership	The managers will start having monthly meetings to discuss common matters. The managers will start visiting other teams' meetings and tell what's happening in their team. The roles and responsibilities of teams and employees will be discussed first internally in teams and thereafter in open forums in personnel events. Team descriptions will be added to the company Sharepoint.
Roles, rewarding and development	The managers will clarify the roles of teams and positions. Thereafter the roles will be discussed and agreed on with each employee. An employee of the quartal will be selected by the personnel 4 times / year and rewarded. The criteria will be "This person is a good collaborator and takes others into account in their actions.". Sales will be required to send emails of remarkable sales events and give thanks to the people involved. Trainings for communication and interaction skill will be arranged in 2022 and regularly thereafter.
Collaborative factors	The team-selling project will be taken up again and developed to a working model. The interactive functions of Teams will be explored to find a working way to collaborate online. Short events for the whole personnel will be arranged at the same time as sales meetings and sales meetings will be held live at the office. Fit4Change and other general trainings will be organized for groups with attendees from all teams.
Environmental factors	Free workstations will be made at each department and people will be invited to sit there. It will be investigated if one or more workspaces for working together could be created.

Figure 6 Initial proposal for best practices for cross-functional collaboration

As depicted in Figure 6, the initial proposal is built from the following elements: Values, Leadership, Roles, rewarding and development, Collaborative factors, and Environmental factors. All categories target a specific area in the company starting from the top level with the foundation, the values that guide the company and everything done. The categories go downwards to the leaders, the employees, and finally to more concrete actions at the basic operational level.

The recommendations for values are focused on the weaknesses concerning the new management and the message it is relating to the company and on the weakness stating that people in different teams play different games. The collaborative values must be promoted by the management and kept as a topic for discussion among employees. It is also important that the values and a spirit of unity is promoted from the employee side. Adding common goals, employees have a strong feeling of what they are working toward together. These measures diminish the silos on a mental level and strengthen a feeling of unity. Keeping the collaborative values in mind steers people to play the same game.

In the Leadership category the recommendations are focused on the weakness concerning lack of information sharing from the management side and on weaknesses concerning the siloed structure of the organisation and people not knowing what kind of work is done in other teams. To lower the boundaries between teams the managers must visibly demonstrate a collaborative behaviour, this is done by having regular meetings together and by visiting other teams' meetings. The example set by managers reflects on how employees behave. The regular meetings contribute to the information sharing among managers and that way each manager has more knowledge of what is going on in the company and can share information. The purpose of managers cross visiting team meetings is also to share information and as a bonus to learn about other teams.

The work toward people learning more about the roles and responsibilities of others is started by discussing them internally in team meetings and then at suitable occasions the same discussion is conducted with members outside the own team and roles are presented to the entire company. Team descriptions are also made and posted to the company Sharepoint page. The increased knowledge lowers the bar to contact colleagues as people know who to contact with any specific issue.

The third category focuses on roles, rewarding and development. The recommendations are focused on the weaknesses concerning employees not

knowing the responsibilities and targets of other teams and the compartmentalising of roles. The recommendations also take into consideration the weakness of the organisation being siloed and that the company has not been able to change as fast as required to meet the more complex demands from customers. First the managers must clarify the roles of teams and individual employees and thereafter the roles and responsibilities need to be discussed and agreed on with all employees. The roles and descriptions are not set up to separate teams but to give clarity. As explained in section 4, knowing one's role and responsibilities enables employees to collaborate more.

To be able to collaborate employees need to be provided with training concerning communication and interaction skills. Having more competent employees make it possible for the company to evolve and change and that way meet the requirements of the customers. To promote collaboration the habit of sending out emails informing about success in customer cases and giving thanks to the people involved should be reinstated. Collaborative behaviour should also be rewarded more often. The suggestion is to start rewarding an "employee of the quartal" four times per year. The rewarded employee should be selected by the personnel.

The recommendations in the Collaborative factors category focus on the weaknesses concerning weak knowledge sharing across teams and problems in passing customer cases between teams. The recommendations further focus on the weaknesses concerning people not participating in other teams' meetings and events and the fact that the organisation is siloed. Not all customer cases can be solved with one action but strengthening team-selling a bigger focus is set on the cases of important customers and the team members should feel a bigger responsibility for the customer. The interactive functions of Teams might also provide help here by providing a platform for handling customer cases and to share knowledge.

To learn more about colleagues across the organisation and help bridge silos the suggestion is to have more joint events. They can be for the entire company

or for smaller groups. Here the suggestion is to organise these events at the same time as sales meetings because they gather all employees to the head office. Opportunities for mixed team trainings should also be explored. They are a good way to make people who normally do not interact meet.

The fifth and final category give recommendations to the physical working environment. The recommendations are targeting the weaknesses that people do not participate in each other's meetings and learn about what others are doing and the fact that the organisation is siloed. To learn about what others are doing one needs to spend time with them. Therefore, the first recommendation is to build free workstations at each department and to encourage people to go sit with another team at least sometimes. The second recommendation is to investigate if it is possible to create workspaces that are meant for working together. In practice this would mean spaces that are easy to access and that are built with teamwork in mind as opposed to meetings.

5.3 Description of the creating of the proposal

The following sub-sections describe the co-creation of the proposal in the workshops and interview.

5.3.1 Proposal for Values

In the workshops there was a consensus that the values of the case company are good and that there are values that are directed at promoting collaboration. Therefore, there is no need to create values. The values are also joint for the entire corporation which means that it would be practically impossible to change them. There was however also a consensus that the values have been forgotten and that not all employees even know the values. One interviewee said:

> *Everybody should know the values and what they mean. But it is a long time since they have been discussed. (CIC officer 2)*

The discussion around how the collaborative values should be promoted was lively. Everybody agreed that the discussion should start from the CEO and the Country manager. It must be on their agenda to talk about the values. It was suggested that there could be a change of perspective to the narrative of the statements by the managers. The statements are heavily focused on turnover or take up points from the balanced score card. One suggestion was put like this:

> *Nowadays they only talk about turnover. There should be a change in the communication and the facts that affect the work of each individual should be taken into consideration. (Sales 1)*

It was consequently seen that it is important to bring the discussion about the values to the employee level. That gives everyone a chance to figure out the meaning of the values to oneself. It was seen to be important that everyone has the opportunity to learn the values and discuss their meaning for everyday work.

The last part of the discussion was focused on how to promote a sense of community. Many of the participants said that the global Covid-19 pandemic had had a huge effect on the feeling of unity. Therefore, it was seen most important to simply bring people together to work and mingle.

In the final workshop the topic of common goals and promoting a sense of community was discussed further. It was seen as a good idea to have some goals that would be joint across team borders for example for team-selling teams. One of the attendees also brought to attention the information that previously the company had had a cultural ambassador who’s task it had been to spread information about values and to promote a working culture that supports the values. It was considered that the idea of a cultural ambassador had some substance to it and it was put forward as one of the recommendations.

5.3.2 Leadership

The discussion around the topics regarding leadership was not flowing as lively as the discussion about values. There was a feeling of cautiousness in the discussion. Some of the attendees thought that the example set by the managers is not that important and that the behaviour of the managers should not be steered too much. One attendee said like this:

> *Leadership must come by nature, every manager is different and brings their own character into the coaching. This should not be changed by force. (Sales manager 1)*

Once the suggestion started coming there were nice suggestions that received support and a good debate about the factors that should not be focused on. It was considered that at this point not too much focus should be put in the managers way of encouraging collaborative behaviour. The thought was that the opportunities will come naturally and then it will be easy to support the collaboration.

The suggestions that received support were ones regarding the managers joint activities. It was seen as a positive idea that the managers from different teams would have regular meetings together and that managers would be actively involved in other teams' meetings and activities. These activities were considered being of a nature that will increase the common understanding and the managers will be able to better explain ongoings in other teams to their own team members. It was further discussed that it is important how the ongoings in the managers meetings are displayed to the employees. One attendee thought that in the past there has been a clear image of the managers being pitted against each other when discussing common matters. This thought gained support from other attendees on employee level. The managers first disagreed but after some discussion they saw what was meant and agreed that in the future it would be important to display even more clearly that they are working together towards a common goal which is a successful company.

There was a strong consensus that there should be more communication and information sharing in the company. It was discussed what amount of information should be shared and at what point. It was not completely agreed on but when the conversation was focused on the topics from the conceptual framework the suggestions were quite similar. It was suggested that on a general level it is good that the managers share information about the roles and responsibilities of teams. To get more understanding of the everyday work in different teams it was suggested that the employees should tell others about their work. It was suggested that this could be done in smaller groups to avoid the pressure of speaking to a big crowd. The personnel events were seen as a good opportunity for this kind of workshops.

5.3.3 Roles, rewarding and development

When the discussion was turned to the topics around roles, rewarding and development the discussions were again livened up. All attendees believed that these were important factors that were not brought up enough in the company. After the changes in the company structure due to the start of the Nordic cluster there were people in the company that did not know what their role is. One attendee said:

> *It is hard to focus on collaboration when I don't even know what my responsibilities are. (PMM&S 1)*

Many attendees suggested that the roles and responsibilities should be made clear. It was agreed that first the roles should be discussed on management level and thereafter with each employee focusing especially on the ones whose roles had changed but also to match everyone's role to what they are actually doing. One attendee told that in the past there had been a practice of sharing the own goals inside the team. This practice received support and it was suggested that it should be done also in the future. It was also suggested that the roles and goals of teams should be discussed across teams to gain understanding. Some attendees on management level had fears that structuring tasks too precisely would not promote collaboration but make the silos worse as

people would start hiding behind their task descriptions. After some discussion it was however agreed that to be able to do their job people need to have clear understanding of their role and tasks and that it should be a factor that makes it easier for people to collaborate. It was discussed that it is the managers' role to make sure that behaviour that supports silos will not start to appear and that knowing the different teams' tasks and special skills that people might have should make it easier to reach out when help is needed.

The thoughts and opinions about rewarding collaborative behaviour were similar among all attendees. The basic consensus was that there needs to be a better culture for rewarding people. Everybody agreed that especially giving thanks is extremely important and that it should be done more. It was discussed that in the case company there had not been built up a culture of acknowledging people of their efforts and giving thanks. It was thought that this kind of culture could and should be built. When asked how they would want to be rewarded one attendee said:

> *Well, it is really nice when people come and say thank you, it makes you feel that you and your efforts matter. (CIC officer 1)*

Many attendees thought that in addition to thanking people, material rewarding is important. One attendee suggested:

> *Real and concrete rewarding should be reinstated, and it should be public. (Sales 3)*

Amongst the managers the thoughts on material rewarding were a little more hesitant. There were doubts about how public rewarding would affect the ones not being rewarded. Would a stronger material rewarding culture cultivate jealousy? None of the employees brought this up but when asked about it nobody believed that rewarding would bring up jealousy. Instead, everybody thought that the case company had an atmosphere where people are able to be happy about others' accomplishments. One attendee summed it up like this:

> *When I know what I can be rewarded for, and everybody can be rewarded for their own accomplishments, jealousy will dissipate. (Sales 3)*

In general the attendees did not have strong opinions about trainings. After two years of working from home due to the Covid-19 pandemic the one suggestion that received the most support was that live trainings should be organised again. Trainings in networking skills got some support but many argued that regular training was not needed that it would be enough to have a lecture or training every now and then. On the managerial side it was even argued that no such training is needed. In the last workshop the idea of networking training was discussed in depth and the consensus was that it is important to develop social skills and that the knowledge the managers can pass on is not sufficient. Therefore, a suggestion of organising trainings in communication and interaction skills was put forward.

5.3.4 Collaborative factors

The proposals for collaborative factors followed the same relatively unanimous path as the previous topics. The discussion first circled around what kind of collaborative activities are possible and the most important factor brought up was that the activities need to come from a concrete need to collaborate. It was thought important to avoid collaborating just out of necessity to collaborate. At the same time all attendees agreed that success with customers require collaboration and that the case company had been successful in creating project teams around customer projects. The case company has in addition to traditional project teams been exploring with a team-selling activity where the team members are encouraged to be more active toward the customer instead of just being reactive. It was suggested that the team-selling should be developed. There was however also discussion about the team-selling being less successful in the past. Many reasons to the failure were found but the attendees did see potential in the basic concept and thought that by learning from previous attempts it would be possible to make it work. But there was also a thought to leave a door open to stop the project. The initiator of this idea said:

> *The team-selling activity should be investigated, regenerated, and tried to reinstate but it should be buried if it does not work. (Sales 2)*

The IT-platforms were a topic that woke many different opinions and attitudes. They are necessary to operate but they did receive much negative opinions and IT-platforms were seen to inhibit real collaboration. It was proposed that the number of different tools in the case company should be decreased. This idea was after some discussion discarded as impossible. Instead, it was suggested that it should be made more clear how the different platforms are supposed to be used, when, and for what. Even though the usage of IT-platforms for collaboration did not receive much support it was decided in the final workshop to put forward a general suggestion of developing the IT-platforms. The thought was to investigate how to actually be able to collaborate over the IT-platforms or how it could be used more effectively for activities across team borders.

In the first workshop there was a discussion about how the back-office employees could provide more information about phone calls with customers to sales. In the CRM-tool and the phone system that CIC is using there is a link, and it was proposed that CIC officers should put more time into writing about the customer activities in that tool. This was considered a good idea. After some discussion the proposal was however discarded. It was considered to be an activity that should be put forward, but it was not seen as an activity that promotes collaboration in any way.

The last topic in the collaborative factors category were joint events. The first things that were said in all workshops was that events need to be organised again now that the Covid-19 is not a threat anymore. There was a strong consensus that working from home and not having any joint events for the past two years had caused a situation where people do not know each other anymore. It was discussed that personnel events must be reinstated as soon as possible. Further it was discussed that they are not a new thing, the company has a good history of organising personnel events every year. For that reason, personnel events were discarded as a proposal for new activities. Instead, it was proposed that other events that gather the whole personnel should be used more for joint activities. Sales meetings were seen as a good opportunity to organise short events or workshops for the whole personnel. One attendee from

the management team disagreed, his opinion was that sales meetings are only for sales and no other people or activities should be involved. This opinion was overruled by others, and it was explained that the two activities would not interfere with each other.

Joint events include trainings and trainings were also discussed briefly. One attendee from the management side opposed to cross-team trainings by saying that product training has just been made team specific and cross-team trainings would not work. This led the discussion to the fact that there are different kind of trainings. All attendees agreed that some trainings must be task or team specific. What other training is needed divided the attendees. It was not agreed on the importance of other types of trainings such as sales training or training in communication skills. In the final workshop it was decided that the personnel must be trained according to their need in more than just product knowledge. So, a proposal for organising cross-team training was made.

5.3.5 Environmental factors

The last topic for discussion in the workshops were environmental factors i.e. architectural matters. The attendees were enthusiastic about ideas of creating possibilities for people from different teams to sit together. Many felt that they were not ready to give up their normal workstation but admitted that the global Covid-19 pandemic and working from home for two years had changed their attitudes. One attendee said:

> *Before the pandemic I could not have thought of not sitting at my own workstation with my books and files but now I have learnt that I don't need them that much and could easily sit anywhere. (CIC officer 2)*

A suggestion that at every team's working area there should be free workstations for anyone to sit and work at was supported. Many of the attendees said that they would like very much to sit with different teams. There was some discussion about possible disturbance that a new sitting system could bring but the consensus was that people know how to take others into

consideration if they see people on the phone. An open office architecture is newer free of disturbances. One attendee made an important comment about possible new workstations. He said that the free workstations that there are now have been robbed and it is not possible to just come and sit there and plug in the monitors and power to the computer. If new workstations were to be made it was important that they would be well equipped and function with a plug-and-play theory. And even more importantly that no equipment was to be lent or taken from them.

There was discussion about the common areas as well. The workshop attendees were of the opinion that the coffee room should not be touched, that it was good as it is and people were already gathering there to sit for coffee breaks. A suggestion that there should be a common working area with a more relaxed furnishing divided the opinions. One attendee said:

> *In my opinion we are at the office to work and not to hang around and work should be done properly, sitting at a desk. (Sales manager 2)*

Not all opinions were quite so harsh but there was a clear division on some not believing that more relaxed work areas would be used and some believing them to be a good idea. It was decided to let the thought mature and maybe be taken up again later.

The office building of the case company has several floors. The working stations are on the first floor and meeting rooms etc. are on the upper floors. A suggestion that a small meeting room should be made on the first floor was considered to be a good idea. It was seen that a small meeting room close to where everybody is sitting would attract people to have more informal meetings together.

This completes the proposal building section. In the next section the initial proposal is validated and a final proposal for best practices for cross-functional collaboration is created.

6 Validation of the proposal

The previous chapter describes the co-creation of the proposal for best practices for cross-functional collaboration. This chapter describes the validation of the initial proposal. The chapter first provides an overview of the stage. Then it gives a description of the validation feedback and describes the adjustments made to the initial proposal. Finally, this chapter presents the outcome of this study, the final recommendations.

6.1 Overview of the proposal validation

The objective of the validation stage was to evaluate the proposal and confirm the feasibility to implement the proposed actions from a business perspective. The validation was performed by gathering feedback and critique from representatives from the senior management. The representatives were assessing aspects such as practicality and potential impact on the case company.

The validation was conducted in two separate interviews in order to receive feedback that was not dependent on the other stakeholder. Both interviews were started with an introduction to the business problem, the objective, and the outcome of the study. After that the findings from the current state analysis were presented and discussed briefly. In the last part of the introduction the outcome of the literature review, the conceptual framework was presented followed by presenting the initial proposal.

After the introduction each of the categories in the initial proposal were discussed and the purpose for each proposal was given. The stakeholders were encouraged to assess and comment each proposed action. The feedback was recorded in field notes. Based on the feedback the initial proposal was adjusted and formed into the final proposal.

The stakeholders for the validation stage were chosen in a way that could give two different viewpoints to the proposal. The stakeholders were a representative from Human Resources and the Country manager. The purpose of this selection was to get one viewpoint from a personnel productivity and wellbeing perspective and another from a more sales-oriented perspective.

6.2 Adjustments to the initial proposal

The feedback given to the initial proposal by the chosen stakeholders was overall very positive. The topic of the thesis was considered to be important and the proposed actions to provide value to the case company. The feedback given by the stakeholders is depicted in Table 5.

Table 5 Key stakeholder feedback for final proposal

Category from proposal	*Suggestions from stakeholders*	*Description of the suggestion*
Values	a) Remove 4 times / year. b) Remove common goals. c) Remove the cultural ambassador. b) Make the cultural ambassador a rotating post.	a) It was suggested that collaborative values should be related at all Town hall meeting regardless of how often they are organised. b) Common goals was not seen to belong to this category an was suggested to be removed. c) One stakeholder thought that a cultural ambassador would be merely a nice idea but nothing that would work in practice and suggested it be removed. d) The other stakeholder considered the cultural ambassador a great idea and suggested that by making it a rotating post everyone would have the chance to contribute.
Leadership	a) Team descriptions shared verbally.	a) It was suggested that team descriptions should also be shared verbally as they are easily forgotten on an IT platform.
Roles, rewarding and development	a) Success in sales told live not by email. b) Interaction skill training focus on managers. c) Interaction skill training from time to time.	a) It was suggested that instead of adding to the email load remarkable sales events should be spoken about in joint events. That would also make the thanking of involved people public. b) It was suggested that training for interaction skills should be focused on managers and that it is not as important for employees. c) It was thought that interaction training is not needed every year, from time to time is sufficient.
Collaborative factors	a) Remove Teams as interactive action. b) Teams used as project tool. c) Short event -> common lunch.	a) It was thought that there is so much IT load as is that Teams as an interactive tool is not good and it is better to focus on face-to-face interaction. b) It was suggested that Teams could be used as a tool for customer projects to collect all data in one place. c) As an adjustment is was suggested that short event for the whole personnel should be changed to joint lunches.
Environmental factors	-	-

As seen in Table 5, all categories except the Environmental factors received some change suggestions. The following sub-sections describe the suggestions and the changes made to each proposal.

6.2.1 Feedback and changes made to Values

Both stakeholders agreed that the values had been somewhat forgotten in the current discussion and communication. Especially the Country manager was of the opinion that this is a very important topic and commented the first proposal “The management will start talking more about collaborative values in the Town Hall meetings 4 times / year”:

> *This is it. This is exactly what I have been thinking about and planning to do already in the say I have in our joint session during the next sales meeting. (Country manager)*

He did however suggest changing this proposal slightly by taking away the reference to how often the values are communicated. It was thought better to simply suggest that the collaborative values be discussed in all Town Hall meetings.

The meaning of having the common goals in this section was discussed. The importance of having common goals was well understood but it was suggested that it be removed as it was not in line with the other proposals in this category that were directly connected to the collaborative values and the workplace culture. It was further considered that the collaborative values and the balanced scorecard are the factors that create the common goals and a shared purpose so stating a need for common goals was redundant.

The proposal for a cultural ambassador received totally different feedback from the stakeholders. The HR representative did think that it was a nice idea on paper but that in practice it would simply be rhetoric. He did not believe that such a position could be successfully carried out and that possible actions would be somewhat forced at best. The Country manager on the other hand considered a cultural ambassador a brilliant idea. He was very enthusiastic about the idea that the responsibility for the workplace culture and promoting values would be a task for everybody. He meant that the managers alone could not create a good atmosphere and will to collaborate. The opinion of the Country manager weighted more in the decision for this proposal and it was left

in the final proposal with a change to make it a rotating post so that everybody can contribute and bring up different ideas.

6.2.2 Feedback and changes made to Leadership

The proposals in this category received very little feedback that resulted in changes in the final proposal. The idea that the managers are role-models for collaborative behaviour was seen natural. Some discussion was had with the Country manager about the current situation and the need to enhance the importance of the managers behaviour. The outcome of the discussion was a common understanding that there was some opposition amongst the managers. It was not an intended opposition but displayed to the employees in a way that was not supporting collaboration and could be interpreted as an “us against them” manner.

The purpose of team descriptions was questioned by the Country manager. The explanation provided was to his content and he only wanted to make an addition to the proposal. The addition also added to the final proposal was that the team descriptions should be shared verbally in a joint event once finished as nobody will go to the Sharepoint to read them. It was however considered that it is good to have the team descriptions available in Sharepoint where they can be reviewed and presented to new employees.

6.2.3 Feedback and changes made to Roles, rewarding and development

When reaching this stage of the interview the Country managers first question was:

> *Do we really have employees that don’t know their roles and targets? (Country manager)*

There was then a lively discussion about the changes in the company and that the position of several people had changed and that in fact one of the attendees in the previous stage of the study had pointed out this exact fact. He was not

completely sure about his tasks and responsibilities. The discussion went on to go through the changes in the customers' demands and how the tasks of many employees had changed over the years. The result of the discussion was that this proposal was indeed necessary.

The country manager wanted to enhance the importance of the spoken word and in his opinion sending email should be avoided whenever possible. For that reason, he suggested that sales success stories are better shared in joint events. This reduces the number of stories that can be shared but gives sales an opportunity to go more in depth in the story and give others a chance to learn and hear about what they are doing. It also gives the opportunity to publicly give thanks to the people that have collaborated and made the success possible.

The need for communication and interaction skill training was discussed as a final topic in this category. The HR representative did not see it as important as it had been seen in the initial proposal. He especially thought that such training should be focused on managers and that employees would not benefit that much of communication and interaction skill training. Overall, he saw it as a nice to have item and was of the opinion that training every few years is sufficient. The Country manager was of a slightly different opinion and did believe that training social skills is important. He too pondered on how often this kind of training is needed. It was discussed that this is a wide topic and there are many different types of training that can be arranged. Together with the Country manager it was decided to leave this proposal as is.

6.2.4 Feedback and changes made to Collaborative factors

The proposal to try and get the team-selling project running was supported by the Country manager. He only commented that it will require for stakeholders of that project to invest time in it and the phase in must be planned carefully and most likely it will require some test teams to be set up before a broader application.

Both stakeholders were of the opinion that collaborative efforts should focus on face-to-face actions. They did agree that the tools need to be developed and clarified but doubted the ability of an IT-platform to be able to be a real interaction tool in practice. The HR representative suggested that Teams could be used as a project tool to gather all project data in one place, accessible to all involved people. That way it would be an enabler for collaborative actions but not in the focus. As there was a will to focus on face-to-face actions it was agreed that the suggestion to explore the interactive functions of Teams would be removed from the final proposal.

The discussion about joint events and live trainings was somewhat focused on the affect the Covid-19 pandemic had had on them. Trainings had been relocated to the Internet and Teams. That was seen both as positive and negative. Sessions in Teams made it easier to gather participants from all over the country, but they did lose most of the interaction that live events have. Naturally it is also more costly to have people come to the office and maybe even stay at a hotel to be able to participate in live events. The Country manager summed the discussion by saying that the joint events were especially important for the employees that live far away from the office and do not come there often. Therefore, regular events for the sales team and whole personnel hosted at the office would be considered again in the future.

The nature of the joint events suggested in the initial proposal were also discussed. The HR representative thought that common lunches during sales meetings would be enough and that it would be better with a more defined type of event in the proposal. The County manager did support the common lunches but saw potential in other kind of events too and decided that the proposal should be left as is.

6.2.5 Feedback on Environmental factors

The Environmental factors category did not receive any suggestions for changes but there was a discussion of how successful especially the proposal

to make free workstations available for anyone to use would be. Both stakeholders raised a concern that people are slaves of their habits, and the new workstations would be left unused. They were also concerned that a new system would create disturbance in the working environment. The discussion was led to analysing the changes the Covid-19 pandemic had had on the work in general and that people would be forced to change their working habits anyway when returning to the office. It was decided that visitors would not in fact make too much disturbance and that people would need to take responsibility of them having a silent environment if a Teams meeting required that. The proposal was left as is and decided it might be worth a try. The success would need recruiting people to show the way but trying would not be a big effort. If successful it might have a favourable impact.

6.2.6 Summary of changes made to the initial proposal

Four of the initial proposals were adjusted based on the feedback received in the validation stage. Two proposals were removed. The changes are shown in Table 6.

Table 6 Changes made to the initial proposal

Category from proposal	*Initial proposal*	*Final proposal*
Values	The management will start talking about collaborative values in the Town Hall meetings 4 times / year.	The management will start talking about collaborative values in the Town Hall meetings.
	Common goals will be set for members of team-selling teams.	~~Common goals will be set for members of team-selling teams.~~
	The cultural ambassador will be reactivated to start promoting community and team spirit via different events.	The cultural ambassador will be reactivated as a rotating post to start promoting community and team spirit via different events.
Leadership	Team descriptions will be added to the company Sharepoint.	Team descriptions will be added to the company Sharepoint and communicated verbally by the management in a joint event.
Roles, rewarding and development	Sales will be required to send emails of remarkable sales events and give thanks to the people involved.	Sales will start sharing remarkable sales events and give thanks to the people involved in joint events.
Collaborative factors	The interactive functions of Teams will be expored to find a working way to collaborate online.	~~The interactive functions of Teams will be expored to find a working way to collaborate online.~~

As depicted in Table 6, the Values category had the biggest number of changes. It was decided that the communication of collaborative values should not be tied to a number of times that it is done yearly, the values should always be related. The common goals for team-selling team members were seen slightly out of context in this category and therefore removed. A cultural ambassador was considered to be a good idea, but it was a post where the contribution of all employees was wanted to bring variety and diversity. To the proposal of a cultural ambassador an addition about it being a rotating post was made.

In the leadership category it was considered that team descriptions are such an important matter that they must be communicated verbally to the company and that was added to the initial proposal in addition to adding the descriptions to the Sharepoint. The senior management wanted to emphasise the importance of the spoken word and not increase the number of emails sent. A change was made in the Roles, rewarding and development category to align with this strategy. Sharing remarkable sales events would be made live.

The final adjustment was made to the Collaborative factors category. The senior management wanted to stress the importance of collaborating face-to-face and not add to the number of IT-platforms already used to avoid being in direct contact to colleagues. Therefore, the proposal of exploring ways to use Teams as a collaborative tool was removed.

6.3 Final proposal

The final proposal for best practices for cross-functional collaboration is presented in Figure 7. The actions proposed are categorised the same way as in the conceptual framework and the initial proposal.

Proposal for best practices for cross-functional collaboration	
Values	The management will start talking about collaborative values in the Town Hall meetings. The collaborative values will be discussed in team meetings in 2022. The cultural ambassador will be reactivated as a rotating post to start promoting community and team spirit via different events.
Leadership	The managers will start having monthly meetings to discuss common matters. The managers will start visiting other teams' meetings and tell what's happening in their team. The roles and responsibilities of teams and employees will be discussed first internally in teams and thereafter in open forums in personnel events. Team descriptions will be added to the company Sharepoint and communicated verbally by the management in a joint event.
Roles, rewarding and development	The managers will clarify the roles of teams and positions. Thereafter the roles will be discussed and agreed on with each employee. An employee of the quartal will be selected by the personnel 4 times / year and rewarded. The criteria will be "This person is a good collaborator and takes others into account in their actions.". Sales will start sharing remarkable sales events and give thanks to the people involved in joint events. Trainings for communication and interaction skill will be arranged in 2022 and regularly thereafter.
Collaborative factors	The team-selling project will be taken up again and developed to a working model. Short events for the whole personnel will be arranged at the same time as sales meetings and sales meetings will be held live at the office. Fit4Change and other general trainings will be organized for groups with attendees from all teams.
Environmental factors	Free workstations will be made at each department and people will be invited to sit there. It will be investigated if one or more workspaces for working together could be created.

Figure 7 Final proposal for best practices for cross-functional collaboration

As depicted in Figure 7, four of the five categories were adjusted compared to the initial proposal. In none of the categories all proposals were altered. The

initial proposal can be found in Section 5.2 and the changes made to the initial proposal to create the final proposal are described in Section 6.2.6.

This completes the proposal validating section. The next section summarises the study, recommends the next steps that need to be taken to implement the proposal in the case company and provides a self-evaluation of the study.

7 Conclusions

The previous chapter describes the validation stage of the initial proposal and creation of the final proposal. This chapter, the final section of the study, contains an executive summary, recommendations for practical next steps for implementing the proposed actions, a self-evaluation of the study and its results, and last, the closing words.

7.1 Executive summary

The objective of the study was to propose best practices for cross-functional collaboration for the case company. The outcome of the study is the proposal that provide the case company with practical actions that can be used to improve the cross-functional collaboration. The case company has realised that there is a disconnect in collaboration between teams. The global Covid-19 pandemic, working from home for two years and the affects that the pandemic has had on global component supply combined with the increased demands from customers has made this disconnect ever so evident and the case company is determined to improve its operation.

The research approach of the study was design research using a qualitative research method. This approach was chosen because the topic of the study is a real-life business problem in a specific company and the objective is to create a proposal only to the specific business problem. The study was conducted in four stages and divided into seven chapters that describe the four stages of the study. Before starting the project, a project plan was made. The plan consists of the research approach, the research design and the data collection and analysis table. The plan helped in structuring the study and gave a timeline for each stage of the study.

The first stage of the study was analysing the current state of cross-functional collaboration in the case company. Knowledge was gathered by interviewing people working in different teams and different positions. A large number of

people were included to get a good picture of the ways of communication and collaboration and to pinpoint the biggest weaknesses. The findings were divided into two categories of strengths and four categories of weaknesses to help understand and process them. The categories for strengths were communication and ways of working. The categories listing weaknesses were tools, email practices, collaboration and silos, and management matters. The tools category includes weaknesses directly related to the tools or using the tools. The email practices category includes weaknesses related to practices and expectations related to email. The collaboration and silos category includes weaknesses related to collaborative practices, peoples' roles and responsibilities and the siloed nature of the case company. The management matters category includes weaknesses related to weaknesses concerning management behaviour and communication.

After the current state analysis, solutions for the weaknesses concerning collaboration and silos and management matters were sought in relevant literature. The findings were categorised according to a structure found in the literature and adapted to the weaknesses from the current state analysis and summarised as ideas for each category and a conceptual framework.

The conceptual framework and the findings from the current state analysis were used as a baseline in workshops where an initial proposal for cross-functional collaboration was created. This was the third stage of the study. The stage was divided into two parts, in the first part ideas were collected and in the second part the ides were reviewed and the initial proposal created. The events for the first part were started with an introduction to the study followed by presenting the findings from the current state analysis and the conceptual framework. All sections of the conceptual framework i.e. all relevant weaknesses were discussed in the events. Proposals were gathered and categorised according to the logic in the conceptual framework. The final workshop was started by presenting the proposals gathered in the previous events. Thereafter all ideas were discussed and the initial proposal formed.

The initial proposal contains five categories: Values, Leadership, Roles, rewarding and development, Collaborative factors, and Environmental factors. The Values category contains proposals related to communicating the collaborative values and discussing them, setting common goals to create a shared purpose, and reactivating a cultural ambassador to promote team spirit. The category concerning Leadership contains proposals for collaborative actions for the managers, and proposals to create open communication flows about the roles and responsibilities of respective teams and putting up team descriptions for everyone to see. In the Roles, rewarding and development category the proposals suggest actions such as clarifying roles and responsibilities, the selection of an employee of the quartal, and developing the communication and interaction skills of employees. The Collaborative factors category contains proposals targeting concrete collaborative actions such as reinstating the team-selling project and organising events for the whole personnel and organising cross-team trainings. The final category, Environmental factors, contains proposals for changes in the architecture of the office to enable collaborative behaviour.

In the fourth and final stage of the study the proposal was validated by senior managers in the case company. The validation was performed in two one-to-one meetings. The first meeting was with an HR representative and the second was with the Country manager. Both meetings begun with an introduction to the study where the objective and the outcome of the thesis were presented followed by an overview of the results from the current state analysis and the conceptual framework. After the introduction the co-created initial proposal was presented. Each category of proposals was taken up for discussion and each proposal was evaluated and commented by the stakeholders. Overall, the response was very positive and it was seen beneficial that the proposal targeted many areas of the company operation. Four proposals were adjusted and two removed based on the validation feedback.

The final proposal provides a set of practical actions to improve cross-functional collaboration in the case company. When implemented they will rise the feeling

of community amongst employees and enable and encourage collaboration which makes operation more effective and decrease the number of errors in handling customer cases across teams. Ultimately it will be seen as better customer service.

7.2 Practical next step recommendations

Implementing the actions suggested in the outcome of this study, the proposal for best practices for cross-functional collaboration requires categorising them according to the amount of time and effort needed for the implementation and assigning responsibilities and resources for the actions that need more implementation work. The implementation is independent of the categories depicted in the final proposal and the actions and implementation can be divided into three stages: immediate implementation, fast implementation, and implementation over time. A proposal for implementation is shown in Figure 8.

Little effort required, immediate implementation	The management will start talking about collaborative values in the Town Hall meetings.	Country manager
	The managers will start having monthly meetings to discuss common matters.	Management team
	The managers will start visiting other teams' meetings and tell what's happening in their team.	Management team
	Sales will start sharing remarkable sales events and give thanks to the people involved in joint events.	Sales (Management team)
Some effort required, fast implementation	The collaborative values will be discussed in team meetings in 2022.	Management team
	The cultural ambassador will be reactivated as a rotating post to start promoting community and team spirit via different events.	Organizer TBD
	An employee of the quartal will be selected by the personnel 4 times / year and rewarded. The criteria will be "This person is a good collaborator and takes others into account in their actions.".	Organizer TBD
	Short events for the whole personnel will be arranged at the same time as sales meetings and sales meetings will be held live at the office.	Management team
	Trainings for communication and interaction skill will be arranged in 2022 and regularly thereafter.	Training team
	Fit4Change and other general trainings will be organized for groups with attendees from all teams.	Training team
More effort required, implementation over time	The managers will clarify the roles of teams and positions. Thereafter the roles will be discussed and agreed on with each employee.	Management team
	The roles and responsibilities of teams and employees will be discussed first internally in teams and thereafter in open forums in personnel events.	Management team
	Team descriptions will be added to the company Sharepoint and communicated verbally by the management in a joint event.	Management team
	The team-selling project will be taken up again and developed to a working model.	Team-selling coach
	Free workstations will be made at each department and people will be invited to sit there.	Organizer TBD
	It will be investigated if one or more workspaces for working together could be created.	Organizer TBD (same as above)

Figure 8 Proposal for an implementation plan

As depicted in Figure 8, some of the proposed actions only require minor effort and should be implemented immediately. The responsibilities for the actions in the category for immediate implementation are clear and the implementation do

not require much planning to be started. The proposed actions in the category for fast implementation require some effort but the implementation can be done fairly easily with the involvement of one or only a few people. A responsible person should be nominated for the actions regarding the cultural ambassador and employee of the quartal and they should be given the authority to execute the actions and asked to provide an implementation schedule. The fourth action should be taken into consideration when planning sales meetings. The last two actions concerning training should be brought to the attention of the training team. The actions should be considered important and new trainings scheduled for 2022.

The actions in the category for implementation over time require more planning and resources. To implement them three project teams including a nominated team leader need to be created. One team to be responsible for roles, responsibilities and team descriptions, one team to be responsible for the team-selling project and one final team for the changes to the architecture. All teams should create a project plan including at least key stakeholders, timetable, resources required and possible budget. Thereafter the work of each team can be planned, and an implementation schedule decided.

7.3 Self-evaluation of the study

Research credibility is essentially the ability of the researcher to present a convincing story that the methodology behind the study is right and sufficient. Credibility can be described as the unity of the research or the believability of the outcome. In other words, it means that the fieldwork, number of participants, analytic methods, and conclusions are broad enough to convince the reader that the research is conducted soundly. The credibility of a study can be established by informing of the research processes. Examples of trustworthy methods that increase credibility are referring to well established literature, specifying the utilised data analytic methods, corroboration of data analysis with the stakeholders of the study, and describing how data was triangulated. (Saldana et al., 2011)

Taylor (2003) claims that validity is not a thing of substance, instead it is an adjective associated with claims. Therefore, one should always ask the question “The validity of what?”. When the claims are sound, well-founded, or justified, they are likely supported by evidence. (Taylor, 2003:1-2). In research there are two types of validity, internal and external. Internal validity refers to how well the study was run i.e. weather the results were achieved due to the presented research design and its execution. External validity is defined by the extent to which the results of the study can be generalised beyond the situation in which the study was conducted. (Taylor, 2003:10-14). According to Kananen (2013:189) the validity of research is achieved by utilizing multiple data sources that establish a chain of evidence, addressing generalisable matters and promptly answering the research objective. Reliability is proven by replicability, meaning that the outcome of the study is independent of the researcher.

According to the Oxford Learner’s Dictionaries online (2022) logic is sensible reasons for doing something or a way of thinking or explaining something. The objective of this study was to propose best practices for cross-functional collaboration. Design research was chosen as the research approach because its qualities were found to meet the objective of the study. The research design was structured in four stages. First the current situation of cross-functional collaboration was analysed. Second best practices were sought for in relevant literature. Third the findings from the current state analysis and literature were used to co-create an initial proposal that was validated in the fourth stage. As a result, a proposal for best practices for cross-functional collaboration was presented and the objective of the thesis fulfilled in a structured and logical manner.

At the beginning of this study a research design together with a data collection plan were created. The stages in the research design were followed as planned. Stakeholders were used as informants in three of the four data stages. The number of stakeholders was high, and they represented many different positions in the case company. Data was collected in both interviews and workshops and the data collection was made in a uniform manner between

informants in different stages to ensure information comparability. The data collection stages reached points of information saturation that indicated that the data collection was consistent and returned key issues. Data was also collected from literature adding a theoretical aspect to the study. It can be concluded that the validity and credibility of this study are proved by the structured manner of conducting the study and the triangulation method used.

Even though the objective of the thesis seemed very clear when beginning the Data 1 stage, it was proven quite difficult to structure the interviews well enough and ask the right questions to find all the strengths and weaknesses and to reveal the real issues. The interviews were somewhat unstructured and the focus a bit off the actual issue revealed in the interviews. The issue with the focus of the interviews can be traced back to the fact that the objective was adjusted a little after the first data collection stage as the current state was clarified. To get an even deeper understanding of the problem some more interviews with a slightly different focus could have been conducted. The answers i.e. data gathered from the first data stage and the extent of the interviews were however seen sufficient to ensure the validity of the study. The lack of the author’s experience in conducting interviews can be seen in this stage of the study. There was however a clear improvement seen as the interviews proceeded.

The Data 2 stage, the literature review got off to quite a slow start due to some notable issues in finding reliable and credible sources. Once a few good sources were found the search became easier. It is noted that having a few more extensive sources would have contributed to the depth of the literature review. There is however no doubt that there would be a lack of substance in the data collected. The theories of the authors were overlapping on many points and the search for data reached a saturation point where no new theories or ideas were found. Examining relevant literature provided a way to organise the data collected in the previous stage in a structured way that aided in the following stages and made both the results from the first data stage and conducting the following stages comprehensive.

Suggestions in literature emphasised the importance of managerial aspects in solving the business problem. Therefore, the objective was reviewed by the Head of Operations in the case company after the Data 2 stage and the extent of the scope and outcome was discussed. Finding tools to solve the issue was considered to be important even though the outcome would affect the management as well. It was well understood that to solve this kind of issue there is no one tool or method and it requires the contribution of everyone.

The workshops organised to co-create the initial proposal were very successful. The participants were enthusiastic and provided many nice ideas. The usefulness and impact of the proposals were discussed in the final workshop. The proposal is quite extensive and the ability to implement all actions might have needed to be questioned. Fortunately there is diversity in the actions and not all require much effort to be implemented. The response from the stakeholders in the validation phase was overall positive. Many of the actions were complemented and it proved to be difficult to find points to improve.

The relevance of this study was shown from the beginning as the initial business problem was selected by the case company. The study was based on a real business problem and the need to improve it. Relevance was ensured during the study by involving key stakeholders in gathering data and creating the outcome. The outcome of this study is not transferable as a whole to another organisation or context. The business problem is however universal which suggests that at least parts of the outcome can be transferred. The weaknesses identified in the current state analysis should be considered if the outcome was to be transferred to another context. The outcome is only designed to target the specific weaknesses of the case company and for that reason not all possible solutions to the business problem are covered in this study.

It is to be noted that the author of this thesis is a member of one of the teams where the business problem is seen. The position of the author provided insight and knowledge to the operation of the case company. Research reliability might

however have suffered either by the author unknowingly steering the thoughts of the stakeholders or by stakeholders withholding information or politicising the improvement work. The risk has been taken into account and minimized in all possible ways such as conducting the co-creation of the initial proposal in two stages and aligning the improvement proposal with relevant literature.

7.4 Closing words

Cross-functional collaboration is becoming more and more important as the business environment is changing in many ways for example from component sales to solution-based sales and the requirements from the customers becoming more complex. Customer management is no longer a task of one person but requires efforts from many different teams of an organisation. Raising awareness of the need for better cooperation and a need for constant change are the first steps to be taken. This thesis has brought the attention to the importance of good cross-functional collaboration and how the first steps can be taken in the case company.

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