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Success factors and pitfalls in organizational change: a case study

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Abstract

In order to thrive, companies are often going through changes of different kinds. Literature on the topic is widely available, however, companies struggle to succeed. This study analyzes the case of one particular software company in the Gothenburg area going through different organizational changes. Understanding the reality of companies going through those changes is key and the study does so in an iterative way, meanwhile literature offers general best practices that can be followed to achieve a successful change. Data is collected through interviews with the aim of understanding the nature and outcome of the changes from each individual perspective as well as how the best practices that are provided in the literature were put into use. The main findings identified are that best practices were not followed in general, that communication is not efficient enough and lastly, that learnings did occur for the management team but there was a lack of process for handling these learnings, thus not contributing to future changes. A last finding is that the product complexity is causing different problems that hinders change. Mirror organization explains how organizational structures tend to mirror the product structure leading to complications for change. However, we have identified that the literature about best practices for successful change fail to take into account mirroring organizations, which is a contribution from this report for future research. Furthermore, we have identified that the company in the study is struggling to find a balance between exploring new markets and exploit current business and that by applying the different approaches that ambidexterity is arguing for, companies can increase their changes of findings a more successful organizational structure. This case study is an exemplification of how the theory on change management, even though available, is not always put into practice. The study advices companies to look at the already studied best practices and adapt them to each case to improve the success rate of organizational changes.

Keywords: change management, organizational change, product design.

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Table of Contents

Abstract	I
Acknowledgements	II
List of figures	VI
List of tables	VII
1. Introduction	1
1.1 Background	1
1.2 The studied case	1
1.2.1 The Company	1
1.2.2 The Reorganizations.....	2
1.3 Aim & Research Question.....	4
1.4 Scope and Demarcations	4
2. Literature Review	5
2.1 Change Resistance.....	6
2.2 Ambidexterity.....	7
2.3 Mirroring Organizations.....	8
2.4 Current Best Practices for Successful Organizational Change	9
Kanter, Stein & Jick (1992).....	10
Kotter (1996).....	10
Luecke (2003)	11
Beer, Eisenstat & Spector (1990).....	11
Hiatt (2006)	11
Bridges & Mitchell (2000)	12
Oakland & Tanner (2007)	12

2.5 Our model: A Synthesis of Best Practices from the previous literature.....	12
3. Methodology	18
3.1 Research Process & Data Collection.....	18
3.2 Data Analysis	23
3.3 Ethical Considerations.....	23
4. Results	25
4.1 Change One: Understanding, Support & Implications.....	25
4.1.1 Change Understanding	25
4.1.2 Change Support	26
4.1.3 Change Implications.....	27
4.2 Further Changes: Definition & Understanding of changes	28
4.3 Leadership and Decision Making.....	29
4.3.1 Change Leadership.....	29
4.3.2 General Leadership.....	30
4.3.3 Decision making.....	31
4.4 Communication	33
4.4.1 Change Communication.....	33
4.4.2 Overall Communication	34
4.5 Product and Process	35
4.6 Culture	37
4.7 Learnings	38
4.8 Future and Vision	38
4.9 Analysis of the Findings According to the Eleven Best Practices	39
5. Discussion	42

6. Conclusion..... 45

7. References 47

8. Appendices 49

 A. Initial two interviews..... 49

 B. First interview template for first round of interviews..... 52

 C. Second interview template for first round of interviews 54

 D. Interview template for employees 56

 E. Interview template for managers 58

 F. 20 minute interviews 60

 G. Excel Sheet 61

List of figures

Figure 1. Timeline of changes that occurred at the company.	3
Figure 2. Overview of the process.....	18

List of tables

Table 1. Comparison of the different change methods steps, where the three first columns from the left represent the comparison made by Todnem (2005).....	13
Table 2. Overview of all interviews conducted in the study, with information regarding position, department and date of interview.....	19

1. Introduction

In this chapter, the background for the field of study, as well as the company and its situation will be presented. Thereafter, the aim and main goals of the study will be described as well as the limitations of it.

1.1 Background

In today's organizational climate, market trends can change rapidly making it difficult for companies to survive and thrive. As Boonstra (2012) argues there are several reasons as to why companies would like to change their organization, one of which suggests that market opportunities might cause companies to try and maximize their customer value or qualifying for the future. Boonstra (2012) continues with mentioning that in order to stay competitive companies need to be able to adapt quickly to new market opportunities. Changes in the organization can be of many different natures and sizes, but they all share one commonality and that is the effort required in order to be successful. As Tasler (2017) mentions, a company trying to implement change is playing against the odds: it is commonly said that around 70% of changes fail. The question is then why changes so often fail, which Fredberg & Pregmark (2018) try to explain by mentioning that changes can fail due to several reasons such as lack of trust, communication or that the lock-in created by the organizational system needs to be overcome for a change to be successful.

The topic of successful organizational change is very interesting and there are several contributions such as the eight steps by Kotter (1996) or the ten steps by Kanter, Stein & Jick (1992). They both suggest that companies should follow a certain number of steps in order to successfully manage organizational change. However, success is very hard to define, hence the topic of successful organizational change is an interesting one to study further. We therefore decided to do a case study of an actual company performing such organizational changes, and hopefully shed some light and contribute to the field of organizational change and how to be successful.

1.2 The studied case

In this section the company will be presented and thereafter the organizational changes that took place during 2018 will briefly be explained.

1.2.1 The Company

The master thesis was performed in collaboration with a company in the area of Gothenburg, Sweden. The company's main business is developing software for the automation industry and the hardware required for a correct software function, which the company also develops but outsources the production. For the remaining product the company does not develop any other

hardware, instead they integrate their software in products produced by original equipment manufacturers by establishing partnerships. The company originates in Sweden but is part of a bigger multinational group. However, the company is maintaining high autonomy in relation to the group.

From a historical perspective, the company has matured during the recent decade. The company has been focused on a quite stable but small market during most of the early years. However, in the recent years with the rise of the Internet of Things and Industry 4.0, the market has grown in size and showed great potential which has contributed to more competitors and partners entering the market as well as new market areas emerging that were not existing before. In the same manner, the company size has been growing especially during the last four years, and it is expected to keep growing rapidly in the coming few years. The current number of employees is around 80. Taking this into account, the company realized that a change in the organizational structure and processes was necessary in order to meet the new market situation, and so it was decided to change the way of working from a functional approach to a more focused approach to meet the different market opportunities that were present.

1.2.2 The Reorganizations

The discussion of the first change started in 2017 when top management realized the need for focusing more on the new emerging, but related market. This meant that the company must be able to work towards three areas: two already established markets where the company already had good positioning, and a third emerging market. It was therefore decided that it was time for the company to remodel the structure and change the way of working in order to meet market needs. This new market was requiring, among others, faster development and deployment but lower quality requirements in relation to the current addressed markets, while the company main differentiation was in quality but not in speed; hence the need for creating new capabilities and improve speed. This change also included an adaptation to a more agile approach of working, meaning that the company had to change from working in component-based teams, where each team was focused on one of the product components, to working in different area-focused teams that worked cross-functionally, each dedicated to each market the company wants to focus on.

The idea – henceforth referred to as *Change One*– was translated into practice during December 2017, when top management presented the new cross-functional teams and provided external training for introducing agile as a way of working to those employees who were not that familiar with it. After a short time working with this new approach, the frustration regarding the new methodology for some employees was too high. Consequently, top management decided that a new change was needed to keep employee's satisfaction high and that the change towards cross-functional teams was perhaps too big of a leap in one try. It was then decided to create a specific focus group of employees from different departments and titles, to work with presenting a better solution to introduce cross-functional work in the organization so that the change could consider

different views and opinions. This focus group was established during February 2018 and worked up until late 2018, but its outcome had little impact on the organization.

Before this focus group could provide a better solution to move forward with a top-management view of the cross-functional structure, a change was done to ensure good working conditions for any worker, ensuring that frustration levels would decrease to regular levels. The new situation was based mainly on removing cross-functional teams as the main composition, and therefore going backward to the component teams but keeping the area-focused cross-functional teams to some extent. In other words, the organization was back to how it was before the first cross-functional change but added a new layer on top of component teams assigning individuals to different focused-areas. As the natural order of changes, this is *Change Two*, but it is an uncontrolled change if compared to the previous alteration. Since this situation was not a thought situation with a plan to follow but just a temporary solution that tried to combine two different ways of working, it was difficult to define or follow processes or strategies. As a result, the implementation of re-establishing component teams while keeping focused-area teams was difficult and thus created a sensation of an uncontrolled change and confusion.



Figure 1. Timeline of changes that occurred at the company.

As quickly realized by top management, a new change was needed. Therefore, *Change Three* was planned during autumn and executed in late 2018, as can be seen in Figure 1. It was decided to plan this change more thoroughly, integrating employees from different departments and levels and clearly communicating what was happening. The company wanted to achieve a more bottom-up approach, allowing employees to give feedback on change three and be a part of it, instead of applying a top-down approach where top management decided the structure (seen during Change One). This change resulted in the organization taking a step forward towards a defined scaled agile framework. Using an already defined and established method means that in case of doubt there is documentation to check to understand what the tasks are or steps to do

in each situation or for each person, reducing confusion and frustration. Even though the situation that change three provides is more stable and accepted, top management is still looking forward to creating a cross-functional structure or way of working in the entire organization. Change Three has been recently implemented and the outcome is not clear yet.

Relevant to mention, the company perform changes regularly due to a policy deployment happening regularly each year. The same way the policy deployment for the year 2018 was the move of the whole organization towards cross-functional teams, the change for the year 2019 is a single cross-functional team to address specifically the new market that has different needs than the traditional markets that the company has historically addressed, which can be referenced as *Change Four*.

The changes described above have clearly impacted the firm in many ways and have challenged many teams including top management. This scenario is a great opportunity to analyze not only the change itself, but also how the different parts of the company relate and are intertwined so that change and improvement can be supported or rejected.

1.3 Aim & Research Question

The aim of this report consists of two aspects. Firstly, this study tries to understand organizational changes by analyzing a company case experiencing change difficulties. Secondly, this study also wants to analyze the management of learnings during organizational change periods. Thereby, this study aims to be of use for the case company, and other companies in similar situations, dealing with organizational changes, how to be successful and how to manage learnings.

Hence, the research question for this study is as follows:

- How can companies successfully perform changes in the organizations?

1.4 Scope and Demarcations

Changes prior to late 2017 will not be analyzed as the main focus of the study is changes that occurred during 2018. However, if changes occurred prior to late 2017, the information about those, if deemed relevant, will be taken into consideration. Furthermore, the company belongs to a big multinational company that is part of another multi-brand agglomeration. Belonging to a bigger agglomeration could affect the company, but after an initial inquiry, it seems that if it affects at all, it is in a small matter, therefore the implications of the mother company on the studied company will not be part of this study.

2. Literature Review

In the following chapter relevant theories regarding organizational change and what to consider in order to be successful will be explained. This will be followed by an overview of all models used in our paper to describe the steps for a successful change, and thereafter a detailed explanation of each step.

Fredberg & Pregmark (2018) state that, in order to stay alive, organizations of today need to be able to renew themselves, and for that to be successful the lock-in created by the organizational system needs to be overcome. However, this renewal can take many different forms and as Galbraith (2012a) mentions one way an organization can change is by the evolution of the organization design.

In his article, Galbraith explains that there are different dimensions of an organization where the basic three-dimensional organization, consisting of functions, businesses and countries, recently had another dimension added, namely customer focus, all reporting to top management (Galbraith, 2012a). Moreover, Galbraith (2012b) adds that each added dimension contributes to the complexity of the organization and the transformation process.

Beer, Eisenstat & Spector (1990) further explain that successful changes were often not led by top management or the CEO, but more usually started at the bottom of an organization and led by the general managers of those units. Those general managers did not focus on formal structures and systems, but instead created ad hoc organizational arrangements to solve concrete problems. This phenomenon is also identified by Hiatt (2006) and Fredberg & Pregmark (2018), who further mention that this results in the need for organizations to both give direction but allow and support autonomy.

However, reorganizations frequently run into problems. According to Beer et al. (1990), most change programs do not work because of being guided by the belief that the first place to begin with when implementing change is knowledge and attitude of individuals. It is believed that if changes in attitudes occur this will then lead to changes in behavior, and changes in behavior by people will lead to an organizational change. However, the authors conclude that this belief is wrong and that successful change programs focus on placing people into new organizational contexts, which imposes new responsibilities, roles and relationships on them, thus affecting their behavior and forcing a change in attitude. In the paper, the event described for successful change programs is described as corporate revitalization, in which three interrelated factors are required for it to be successful: *Coordination* or teamwork, *High Commitment* and *Competences* to identify and solve problems (Beer et al., 1990).

2.1 Change Resistance

As mentioned by Kotter & Schlesinger (2008) “Many managers underestimate the variety of reactions to change and their power to influence those responses” (p. 134). Managers tend to surprisingly often not take their time to assess systematically who might resist the change and for what reason, even if experienced managers generally already are aware of this fact and who might resist. Instead, managers all too often apply general beliefs, exemplified by Kotter & Schlesinger (2008) as “engineers will probably resist the change because they are independent and suspicious of top management”. Hence, in order for managers to predict what type of resistance could arise during a change, it is important for managers to be aware of the four most common reasons employees might resist change.

According to Kotter & Schlesinger (2008) one major reason why employees might resist change is parochial and self-interest. This is due to the fact that they might think they will lose something of value as a result of the change (Kotter & Schlesinger, 2008). Moreover, the second reason is misunderstanding and lack of trust (Kotter & Schlesinger, 2008). When trust between top management who initiate the change and employees is lacking a situation where employees do not understand its implications and perceive that it might cost them much more than they will gain can arise (Kotter & Schlesinger, 2008).

Hence, trust is identified as a key factor for a change to be successful (Fredberg & Pregmark, 2018). Establishing trust between employees and management for the new change will enable employees to believe and act upon it, where one way of establishing trust is for the guiding coalition to create relationships within the organization and to spend time on networking (Fredberg & Pregmark, 2018). Fredberg & Pregmark (2018) continue to explain that the research on organizational change used to focus on change as a planned from-to process, but nowadays instead must be viewed as a more continuous and iterative process. This leads to another way of enabling trust by breaking down the process of change into smaller steps, with the focus of the change being a continuous and iterative process. With this method, each step that is successful could help build trust and thus allow for the coming iterations to be more accepted by employees. In order for employees to move from the former to the new by an iterative process, an attachment with autonomy is important as it will support the creation of a flexible and iterative process needed for a successful change (Fredberg & Pregmark, 2018).

The third reason mentioned by Kotter & Schlesinger, 2008) for why employees might resist change is different assessments of the situation and that it will cost more than the benefits achieved, not only for themselves but also for their organization. As for the fourth reason, it is specifically toward employees own low tolerance for change (Kotter & Schlesinger, 2008). This is due to the fact that people fear they will not be able to develop the new skills and behaviors that will be required of them (Kotter & Schlesinger, 2008).

Due to these different reasons for resisting change, managers are not always aware of the variety employees can react to organizational changes. However, managers are also not aware of the ways they can positively impact and influence specific individuals or groups during a change (Kotter & Schlesinger, 2008). Therefore, the authors have listed six methods for dealing with resistance to change: Education & Communication, Participation & Involvement, Facilitation & Support, Negotiation & Agreement, Manipulation & Co-optation and Explicit & Implicit Coercion.

2.2 Ambidexterity

As explained in the Introduction chapter, ambidexterity is considered relevant since the studied case company in this research finds itself in a “exploit versus explore” situation, something that ambidexterity can help understand. We believe that the reasons triggering the organizational changes addressed in this study are related to finding the balance between exploit versus explore, where the company need to explore the new market while at the same time exploit the two existing markets. That is why ambidexterity can help understanding the outcome and success or failure of the different organizational configurations. Furthermore, the company first tried to change their entire organization towards a more cross-functional way of working, which was altered for the most recent change (PD Initiative 2019) when the company focused on a single group, this is also recognized by ambidexterity theory arguing for different ways of how to approach the issue of changing the organization successfully.

Ambidexterity refers to the capability of an organization to simultaneously pursue exploitation and exploration innovation (Blarr, 2011; Liao, Liu & Zhang, 2018; Zhang, Wang & Wei, 2019). It is argued that ambidexterity has a positive impact on performance and organizational growth (Blarr, 2011; Zhang, Wang & Wei, 2019). For exploitation, this refers to an organization that captures activities such as efficiency, production, selection and execution. For this scenario, organizations tend to focus on pursuing exploitative activities such as refining their capabilities, applying current knowledge and focus on current activities in existing domains in order to improve and utilize existing competencies (Blarr, 2011). Meanwhile, exploration instead focuses on a new technology base and aims at creating distinctly different competencies (Zhang, Wang & Wei, 2019; Blarr, 2011). Organizations that pursue explorative innovation focus more on activities such as variation, experimentation, flexibility, risk-taking and innovation (Blarr, 2011).

The issue of ambidexterity is that organizations have a specific amount of resources and capabilities, thus exploration and exploitation both compete for the scarce organizational resources that exist (Zhang, Wang & Wei, 2019; Blarr, 2011). In this situation, more resources devoted to exploitation leads to less resources devoted for exploration. This resource competition leads to internal conflicts and offsets its overall benefits (Zhang, Wang & Wei, 2019). Moreover, establishing a balance for resource allocation between exploitation and

exploration might prove difficult as the two often require substantially different, often conflicting, processes, capabilities, structures and cultures (Blarr, 2011).

As it is argued that ambidexterity has a positive impact on performance and organizational growth (Blarr, 2011; Zhang, Wang & Wei, 2019), two dimensions have been created in order to establish the different options that organizations phase in order to achieve ambidexterity (Blarr, 2011). The first dimensions, referred to as “Temporal Dimension”, describes the extent to which organizations pursue ambidexterity simultaneously or sequentially over time (Blarr, 2011). The second dimension, referred to as “Structural Dimension”, describes the extent to which an organization pursues ambidexterity within an independent organizational business unit (meaning separate from the incumbent organization) or within an interdependent organizational unit (meaning a department or division included in the incumbent organization) (Blarr, 2011). The situation of ambidexterity requires managers to make decisions regarding what strategic choices to take in these dimensions (Blarr, 2011).

2.3 Mirroring Organizations

According to MacCormack et al. (2012) there is an existing relationship between the structure of an organization and the design of the products within this organization, that the organization produces. The authors relate to this phenomenon as “mirroring”, where the product tends to mirror the organizational architecture due to reasons such as the organization’s governance structure, routines and communication patterns that in turn constrain the products environment (MacCormack et al., 2012).

MacCormack et al. (2012) mentions that one part of the difficulties that companies might experience when trying to change the organization is the relationship between the design of the product and organizational structure. Hence, when a company tries to change their organizational structure the success rate of the change can be dependent upon if there is a relationship between that organizational structure and the product that the company is creating. Therefore, not taking this mirroring into consideration when changing the organizational structure can negatively impact the chances of success.

MacCormack et al. (2012) further argue that modularity is a concept that plays a critical role for how the product is enabling or not in terms of change, where loosely-coupled organizations will develop more modular product designs. On the contrary, tightly-coupled organizations will develop less modular product designs. MacCormack et al. (2012) state that commercial software firms, such as the firm studied in the present thesis, working towards a goal are more tightly-coupled organizations, meanwhile the more open source-based software communities work as loosely-coupled organizations.

Related to the “mirroring” effect Colfer & Baldwin (2016) further shed light on the topic by stating that it is possible to “break the mirror” by implementing a more modular product design,

which is something organizations can strategically do by implementing these modular partitions.

2.4 Current Best Practices for Successful Organizational Change

In previous literature, several comprehensive models have been presented for how managers can successfully manage organizational change. These models provide step-by-step instructions ('Best Practices') for managers of different aspects that need to be considered for the change to be successful. In this section, we will map the best practices found in the previous literature, and build our own model using the insights from previous models.

As the main takeaway for an effective change Beer et al. (1990) states six overlapping, but distinctive, steps that help companies avoid the shortcomings of a programmatic change and instead achieve task alignment, meaning reorganizing employee roles, positions and responsibilities to solve specific business problems. Those steps are also referred to as the *critical path*, and together develop a self-reinforcing cycle of coordination, commitment and competence.

However, the critical path by Beer et al. (1990) is not the only model representing steps for organizational change. Todnem (2005) did a comparison between three models suggesting steps for successful organizational changes, where the author used Kanter et al.'s (1992) ten steps as the guideline for the comparison (see the first three columns of Table 1). Since we have identified several other models that also describe steps for successful organizational changes, presented below, we decided to do our own comparison since these additional models were considered relevant and could contribute with insights. By using Todnem's (2005) comparison as the base, thus the ten steps described by Kanter et al. (1992) serve as the main guideline for the comparison made by us. Additionally, the eleventh step, although not mentioned in the model by Kanter et al. (1992), was considered relevant as three other existing models mentioned this same step (Luecke, 2003; Beer et al., 1990; Oakland & Tanner, 2007), thus it was included in our paper. Hence, for our thesis we adopted the ten steps from Kanter et al. (1992) and the additional step of *Monitor and adjust strategies in response to problems in the change process*. However, we believe that it is not necessary to strictly follow each step since the different models list their steps at different levels. Hence, we instead argue for "Best Practices" since the order of the steps is not as strict, it is more important to consider all the relevant topics. Therefore, we will refer to the steps as "Best Practices" throughout the report.

The first three models in this section are chosen due to the comparison made by Todnem (2005) that is cited several times, thus strengthening the argument as for why the models used in

Todnem's comparison are relevant. Adding to the comparison by Todnem, we decided to further compare four more models that all share commonalities between the topics mentioned as steps. Moreover, most of the models are also cited several times, strengthening the argument for why they were chosen. The models all discuss steps for a successful change, which was considered relevant. Meanwhile, other models mentioned by for example Johnsson, Whittington, Scholes, Angwin & Regnér (2017) were not considered relevant as they did not consist of the same character, meaning that the models did not suggest a number of steps deemed relevant and necessary for a successful change. Hence, the models used in our comparison all share the commonality of suggesting steps for a successful change. Below, the seven models that serve as input to our final model are outlined.

Kanter, Stein & Jick (1992)

As described in Todnem's (2005) article, Kanter et al. (1992) is the article used as the main guideline for the comparison between three models in total. As for Kanter et al.'s (1992) ten commandments for executing change they are as follows:

1. Analyze the organization and its need for change.
2. Create a vision and a common direction.
3. Separate from the past.
4. Create a sense of urgency.
5. Support a strong leader role.
6. Line up political sponsorship.
7. Craft an implementation plan.
8. Develop enabling structures.
9. Communicate, involve people and be honest.
10. Reinforce and institutionalize change.

Kotter (1996)

Todnem (2005) further adds the model from Kotter's (1996) article regarding the eight-stage process for successful organizational transformation. The eight stages are as follows:

1. Establishing a sense of urgency.
2. Creating a guiding coalition.
3. Developing a vision and strategy.
4. Communicating the change vision.
5. Empowering broad-based action.
6. Generating short-term wins.
7. Consolidating gains and producing more change.
8. Anchoring new approaches in the culture.

Luecke (2003)

The final model used in Todnem's (2005) comparison is the seven-step model by Luecke (2003). The seven steps are as follows:

1. Mobilize energy and commitment through joint identification of business problems and their solutions.
2. Develop a shared vision of how to organize and manage for competitiveness
3. Identify the leadership.
4. Focus on results, not on activities.
5. Start change at the periphery, then let it spread to other units without pushing it from the top.
6. Institutionalize success through formal policies, systems, and structures.
7. Monitor and adjust strategies in response to problems in the change process.

Beer, Eisenstat & Spector (1990)

Beer et al. (1990) argue for the *critical path* when performing a change, and that six steps are crucial for it to be successful. Beer et al.'s (1990) six steps contribute to the understanding and acknowledgement of the comparison by Todnem (2005). Hence, the six steps by Beer et al. (1990) are as follows:

1. Mobilize commitment to change through joint diagnosis of business problems.
2. Develop a shared vision of how to organize and manage for competitiveness.
3. Foster consensus for the new vision, competence to enact it and cohesion to move it along.
4. Spread revitalization to all departments without pushing it from the top.
5. Institutionalize revitalization through formal policies, systems and structures.
6. Monitor and adjust strategies in response to problems in the change process.

Hiatt (2006)

Another model that contributes to the field of organizational change is the five step ADKAR model by Hiatt (2006), which is a more bottom-up method focused on individuals behind the change. This model was also viewed as relevant by us, and thus included in our comparison which was based on the initial comparison by Todnem (2005). The five steps according to Hiatt (2006) are as follows:

1. Awareness.
2. Desire.
3. Knowledge.
4. Ability.
5. Reinforcement.

Bridges & Mitchell (2000)

Bridges & Mitchell also describe a model for successful change which was considered relevant by us in order to increase acknowledgement for the steps in our comparison. The seven steps in the model by Bridges & Mitchell (2000) are as follows:

1. Learn to describe the change.
2. Plan all details carefully and assign responsibilities for all details, establish a timeline and communication plan.
3. Understand who should let go of what, what is changing for employees and who to let go from the company.
4. Help people to let go of the past by communicating with them and giving information.
5. Help people through the neutral zone with communication, rather than information. Here managers should use the four P:s of transition communication (Purpose, Picture, Plan and Part).
6. Create temporary solutions to temporary problems and the high-level uncertainty in the neutral zone.
7. Help people to launch the new beginning by articulating the new attitudes and behaviors needed to make the change work.

Oakland & Tanner (2007)

The final model implemented in this papers' comparison are the six steps as described by Oakland & Tanner (2007). The six steps are as follows:

1. Gain commitment to change.
2. Develop a shared vision.
3. Define measurable indicators of success.
4. Break down success factors into key processes.
5. Break down key processes.
6. Monitor and adjust.

2.5 Our model: A Synthesis of Best Practices from the previous literature

Below, we present our model adopted for the analysis of this thesis. The model is based on the best practices found in the previous literature, accounted for in the previous section. As is seen in Table 1 and in the following list, the set of best practices (BP) adopted for our analysis is the ten best practices of Kanter et al. (1992) plus the additional best practice of *Monitor and adjust strategies in response to problems in the change process*.

BP	Kanter et al. (1992)	Kotter (1996)	Luecke (2003)	Beer et al. (1990)	Hiatt (2006)	Bridges & Mitchell (2000)	Oakland & Tanner (2007)
1	1. Analyze the organization and its need for change		1. Mobilize energy and commitment through joint identification of business problems and solutions	1. Mobilize commitment to change through joint diagnosis of business problems			1. Gain commitment to change
2	2. Create a vision and a common direction	3. Developing a vision and strategy	2. Develop a shared vision of how to organize and manage for competitiveness	2. Develop a shared vision of how to organize and manage for competitiveness	2. Desire		2. Develop a shared vision
3	3. Separate from the past					4. Help people let go of the past by communicating and giving information	
4	4. Create a sense of urgency	1. Establishing a sense of urgency			1. Awareness		
5	5. Support a strong leader role		3. Identify the leadership				

6	6. Line up political sponsorship	2. Creating a guiding coalition		3. Foster consensus for the new vision, competence to enact it and cohesion to move it along			
7	7. Craft an implementation plan				3. Knowledge	2. Plan all details and assign responsibilities, establish a timeline and communication plan	
8	8. Develop enabling structures	5. Empowering broad-based action			4. Ability		
9	9. Communicate, involve people and be honest	4. Communicate the change vision					
10	10. Reinforce and institutionalize change	8. Anchoring new approaches in the culture	6. Institutionalize success through formal policies, systems, and structures	5. Institutionalize revitalization through formal policies, systems and structures	5. Reinforcement		
11			7. Monitor and adjust strategies in response to problems in the change process	6. Monitor and adjust strategies in response to problems in the change process			6. Monitor and adjust

Table 1. Comparison of the different change methods steps, where the three first columns from the left represent the comparison made by Todnem (2005).

BP 1: Analyze the organization and its need for change

As the starting point of any effective change process is to understand and have a clearly defined business problem, the first best practice is for general managers to help employees develop a shared diagnosis of what is wrong and what needs to be improved/ changed (Kanter et al., 1992; Luecke, 2003; Beer et al., 1990; Oakland & Tanner, 2007). This also results in the general manager establishing a core group committed towards understanding the true problem (Beer et al., 1990).

BP 2: Create a vision and a common direction

Once the organization has been analyzed and the shared diagnosis has been established, management can now lead the employees towards a task-aligned vision of the organization that defines new roles and responsibilities (Beer et al., 1990). This is very important in order to guide behavior in the organization, but also aid in providing clarity for the organizational goals (Kanter et al., 1992; Beer & Eisenstat, 2000; Hiatt, 2006).

BP 3: Separate from the past

Moreover, the third best practice argues that it is important for an organization to separate from the past if it should be able to embrace the new change, and thus not get affected by the old structures and routines (Kanter et al., 1992). This separation from the past may include events that demonstrate that change has come, constant stream of information but also an understanding and acceptance of the symptoms of grieving, as well as efforts to protect people's self-interest when they are giving up the status quo (Bridges & Mitchell, 2000).

BP 4: Create a sense of urgency

Creating a sense of urgency is especially important when the organization does not consider the change relevant or necessary, as establishing a sense of urgency can act as motivation (Kotter, 1996). In combination with the established vision and common direction, this sense of urgency could help convince employees preferring the former mindset to acknowledge the need and urgency for a change, and thus not prevent it from happening (Fredberg & Pregmark, 2018).

BP 5: Support a strong leader role

A new vision or awareness of urgency is simply not enough to overcome resistance to change, or to foster the skills needed to fulfill the new organizational requirements. Therefore, it is crucial for general managers to have strong leadership and be able to support their employees during this phase, and to motivate and create structures to reward employees that embrace the change (Kanter et al., 1992; Beer et al., 1990; Beer & Eisenstat, 2000; Hiatt, 2006). Moreover, it is here that managers have the opportunity to show themselves and what they stand for, and

if against the new change they should be replaced as they are viewed as obstacles to the new change (Beer et al., 1990; Kotter, 1996).

BP 6: Line up political sponsorship

In order for a change to succeed it is not enough for only leadership to support the change (Kanter et al., 1992). Hence, the change requires a broad support from employees in the organization such as convincing key stakeholders to be ambassadors of the change (Fredberg & Pregmark, 2018). However, it is not only key stakeholders that should be supportive of the change but also employees that the change targets, whose acceptance of any change is necessary for its success (Kanter et al., 1992).

BP 7: Craft an implementation plan

Following the political sponsorship, a successful change also needs a crafted implementation plan (Kanter et al., 1992; Hiatt, 2006; Bridges & Mitchell, 2000). This seventh best practice is especially important since it provides clarity for employees when a vision is not enough to explain the actual changes in the organization, and provides knowledge on how to change (Hiatt, 2006). The implementation plan should be very detailed, and contain information such as when and where meetings should be held, what positions employees should now work in, work task that should be focused but also more substantial information such as when the change is considered to be fully implemented and the goals achieved (Kanter et al., 1992).

BP 8: Develop enabling structures

Since a successful change requires a crafted implementation plan with details of how the organization should function accordingly, it is also necessary to develop enabling structures that support this new change (Kanter et al., 1992; Kotter, 1996; Hiatt, 2006). The eighth best practice focuses on targeting the mechanisms that resist change in the organization, and instead overcome these by enabling new mechanisms that support the change and make it possible for employees to overcome this resistance by providing the ability to implement new skills and behaviors (Hiatt, 2006). Examples of enabling structures could be workshops, pilot-tests, training programs but also more symbiotic such as rearranging the office desks and workplace (Kanter et al., 1992). The new mechanisms can either be implemented in the existing organizational structure, or be established outside of the organization (Kanter et al., 1992). This scenario can also be described as the issue of ambidexterity, where a new change can be integrated into the existing culture and organization, or separated from the old and instead established as a new organization, free to create its own culture and structure (Blarr, 2011).

BP 9: Communicate, involve people and be honest

Communicating the vision can never be done enough, however it is also important to not simply communicate the change and vision during specific meetings, but integrate it throughout the

entire communication to employees (Kotter, 1996). Involving employees and being honest about expectations and goals, and communicating regarding this, can be potential tools to help overcome resistance amongst employees since they are more integrated in the change and gain a larger personal stake (Kanter et al., 1992).

BP 10: Reinforce and institutionalize change

In order to sustain the change, reinforcing the new cultures, values and structures is very important (Hiatt, 2006). It is also mentioned that one of the mistakes that organizations often do is not anchoring the new changes into the organization's culture (Kotter, 1996). Therefore, it is during this best practice that managers should focus on how to institutionalize the change so that the process continues even after employees have moved on to other responsibilities. Trying to implement this best practice any earlier would not be successful, since it requires that the new approach has been accepted, that the right people are in the right places and that the organization is up and running (Beer et al., 1990).

BP 11: Monitor and adjust strategies in response to problems in the change process

A part from Kanter et al.'s (1992) ten steps, other models also agree upon an additional best practice mentioned as the importance of monitoring and adjusting strategies in response to problems in the change process (Luecke, 2003; Beer et al., 1990; Oakland & Tanner, 2007). It is simply not enough to view the change as a static approach and once the change is implemented to ignore it (Beer et al., 1990). The purpose of change is to create an asset that did not exist before. Thus, an organization needs to be able to monitor itself and response to when a new asset is needed, to be able to adapt to problems in the change process (Luecke, 2003). As an important note, this responsibility does not simply rely on the general managers, but on every employee in the organization (Beer et al., 1990).

3. Methodology

In the following chapter the methodology used through the study is detailed. the research process & data collection will be presented. Moreover, how data analysis was carried out will be explained. Lastly ethical consideration about the study will be discussed.

3.1 Research Process & Data Collection

This study was initiated by the observations and insights that one of the students had gained from prior work experience at the company during 2018. This led to the discussion between the two students and the company in late 2018 that it could be interesting for all the parts to create a master thesis regarding the changes that occurred in the company from late 2017 to the end of 2018, and an agreement was established.

In order to provide a breakdown of the steps that compose the process of this project, Figure 2 presents an overview.



Figure 2. Overview of the process.

The structure of this project has been of an iterative process between theory and empirical findings, where the initial step was a literature study that focused on understanding what theory already existed regarding organizational changes, change management and to gain insights into what possible topics those theories identify as issues. Easterby-Smith et al (2015) argue that academic articles provide a more reliable source of information than other sources since they have been accepted and reviewed by other researches. Hence, we used mainly academic articles

as the primary source of information from theory throughout the entire research, where the search tools being mainly Chalmers Academic Library but also Google Scholar and physical books.

Thereafter, an interview template (*Appendix A*) was created for two initial interviews that took place in order to establish a better understanding of the changes in general and the background of the company. This was determined necessary as the sole observations from one of the students did not impose enough empirical findings to create a draft for the first round of interviews. Throughout the entire research, we applied different methods of selecting the people to be interviewed which Easterby-Smith et al (2015) describe as snowball sampling, random sampling and theory-guided sampling. Table 2 presents an overview of all the interviews in our research.

Explanation	Interview Nr.	Position	Department	Date of Interview
Initial two Interviews		Employee	Shared services	2019-01-09
		Employee	Management	2019-01-09
First Round of Interviews	1	Employee	Engineering	2019-02-08
	2	Manager	Management	2019-02-08
	3	Employee	Engineering	2019-02-08
	4	Employee	Shared Services	2019-02-08
	5	Employee	Engineering	2019-02-08
	6	Employee	Engineering	2019-02-11
	7	Employee	Management	2019-02-11
	8	Manager	Management	2019-02-11

	9	Employee	Management	2019-02-11
	10	Manager	Management	2019-02-11
Second Round of Interviews	11	Employee	Shared Services	2019-02-21
	12	Employee	Engineering	2019-02-21
	13	Employee	Shared Services	2019-02-21
	14	Employee	Shared Services	2019-02-21
Four Short Interviews		Employee	Engineering	2019-04-01
		Employee	Engineering	2019-04-01
		Employee	Engineering	2019-04-01
		Employee	Engineering	2019-04-01

Table 2. Overview of all interviews conducted in the study, with information regarding position, department and date of interview.

In order to identify the initial two interviewees, we asked our supervisor at the company for guidance of whom to interview with relevant overhead knowledge regarding the year of 2018 and the changes. The supervisor proposed one interviewee, and after the interview had been conducted we recognized that the supervisor could also contribute with relevant findings and thus we interviewed the supervisor as well.

The results from the initial interviews led to a second round of literature study, where the focus was on the reflected topics from the interview findings. The results were then finalized in an interview template (*Appendix B*) for the first round of interviews that took place over two days. Since the interview template consisted of many important questions, the interview length was decided to be one hour, with maximum five interviews per day and 30 minutes in between each interview. This was decided so that we could quickly summarize the findings, and then prepare for the next interview.

However, after two interviews we learnt that some questions were not as necessary and did not provide good insights. Hence, we decided to remove some questions and allow for more time on the remaining, more important questions. See *Appendix C* for this second, updated, interview template for the first round of interviews.

When selecting interviewees for the first round of interviews we were relying on theory-guided sampling. Initially, the departments that were deemed necessary to gain empirical findings from were identified and the ratio between how many managers versus employees (that do not have any manager role/ authority as a manager) that should be interviewed was established. In total, we decided to interview ten people. For the final sampling process, interviewees were selected randomly and cross-matched towards our interview schedule with booked time slots. If there was no match between the interviewee and the time-slots, another interview subject was picked randomly. This process was repeated until all interviewees had confirmed their time-slot. As Shenton (2004) argues, this method of random sampling also ensures high credibility of the study and thus achieving trustworthiness.

After having completed five interviews during one day, we furthermore decided that the template should be revised according to the new learnings and insights. Therefore, we decided to split the interview template and create one for employees (*Appendix D*), and one for managers (*Appendix E*). The reason was that some of the questions needed to be asked in a different manner for the managers. This was later applied for the second day of the first round of interviews.

Once the first round of interviews was completed, we had a discussion with our supervisor from Chalmers regarding the interviews. From this meeting, we further discussed the possibility of having a second round of interviews to be able to cover more clearly all departments of the company and thus not miss out on any relevant insights. This is also acknowledged by Guest, Namey & Mitchell (2013) who argue that seeking and documenting multiple viewpoints is part of any good qualitative research study in order to fully understand the social, cultural and contextual complexities associated with the research question. Especially so if the research question is complex.

Hence, we decided to do a second round of interviews with four people over the course of one day, in order to gain insights from all departments of the company. For this sampling the process was very much the same as with the first round of interviews. However, the process of snowball sampling was also applied as we now checked if prior interviewees had mentioned any relevant interviewee from the other departments for good insights, which was the case for one interviewee. Moreover, the same structure as the previous round of interviews was applied, with one-hour long interviews and the same updated templates for employees/ managers.

As the second round of interviews was completed, and the process of data analysis had been started, we decided it was necessary to conduct four more shorter interviews with knowledge-

specific employees from the company. This was considered necessary as the product structure proved complex, thus detailed questions arose that required specific information regarding the product. For this process, we selected the relevant department and thereafter relevant employees that were considered to possess the necessary knowledge/ experience to answer the detailed questions, but also available in the office. In order to understand which employees possessed the specific knowledge, prior experience from interviews combined with one of the students prior work experience was combined in order to select relevant employees. For the final short interviews, the length was set to 20 minutes and an interview template (*Appendix F*) was created with detailed questions.

As for the interview design, a semi-structured approach was selected by us throughout the entire research since Bryman & Bell (2015) argue that the semi-structured interview design allows for open-ended questions where the interviewee understands the topic, but is allowed freedom to answer the question and guide the direction from insights and conversation with interviewer. Bryman & Bell (2015) further mention that there are several benefits of recording and later transcribing the interviews, especially for qualitative research studies. Therefore, we also asked for permission from all the interviewees to record each of the interviews, and later transcribed all the interviews. This was also seen as an important part to get more familiarized with the data. Moreover, the updated interview templates did not pose any new questions or altered questions. Instead, the purpose of the updated interview templates was to either delete not relevant questions or divide the topics to make it clearer, thus the validity of the findings should not be compromised, and the interviews are possible to compare.

As a final step, the empirical findings from the interviews were analyzed and then related to the literature review in the chapter 4. *Results*. Moreover, an Excel sheet (*Appendix G*) was also created. This Excel sheet served the purpose of assisting in the data analysis, making patterns and linking more clearly definable. The results and findings were then discussed and from that we draw our conclusion and suggestions for future research.

Gibbert, Ruigrok & Wicki (2008) explain that the key words for achieving a reliable study are transparency and replication. Shenton (2004) acknowledges reliability as important for the research quality, and argues that thorough documentation and reporting in detail are crucial aspects in order for future researchers to mimic the process of the targeted study. Hence, we took much effort into documenting the steps of gathering empirical findings, how it was related to the literature review but also the analysis of data. Moreover, the documentation was often checked in order to assure that it was understandable and clearly defined, and the methodology chapter of this study was written in detail. Furthermore, we also tried to eliminate bias by working independently, as mentioned by Shenton (2004) is important in order to achieve confirmability.

3.2 Data Analysis

As described earlier in this study, all interviews were recorded and the recordings were later transcribed in order to achieve full clarity and transparency regarding what empirical findings were discovered in the interviews. This process could be described by Easterby-Smith et al (2015) as familiarization with the data.

Hence, we reflected upon the findings after finishing the transcriptions, and together discussed the relevant information. Thereafter, we divided the fourteen interviews so that half of the interviews were coded by one student, and the second half coded by the second student. When both of us had finished our open coding, we switched halves and checked each others codes for further comments or findings. Once the coding was cross-checked, all codes were inserted in one document and categorized according to relevance. However, the categories that were established were too big, so we decided to create sub-categories in order to establish a more defined reflection of the coding. This process was done by both students separately, and then the sub-categories were discussed and one document was formed with the combined sub-categories.

As the process of categorizing was finished, three categories were selected as the main findings, and thereafter we coded the transcriptions once more but with focus on finding codes only for the selected categories, which is explained by Easterby-Smith et al. (2015) as focused re-coding. This time, we decided to code the seven interviews that the other student had coded earlier, so that the same student did not code the same seven interviews again, meanwhile also more familiarization with the data was achieved by switching interviews. Apart from this, the process of coding was the same as the first time.

With the second round of coding finished, and the Excel sheet having been created with relevant quantitative information. The process of linking the different codes and categories began. It is here that the Excel sheet provided clarification and support in linking the codes and findings. Once the linking was completed, we discussed the final results and also checked the initial transcriptions so that no codes or relevant information was missed.

3.3 Ethical Considerations

Due to the nature of interviews with employees from the company, and that they can contain sensitive information that might be personal we, and in agreement with the company managers, decided that no statement would be related to a specific person. Moreover, all data would be anonymized so that participants would be protected. This was considered in order to protect the privacy, anonymity and confidentiality of the participants in order to ensure research ethics.

Especial measures were taken to ensure that the thesis was not biased by the influence of the company. There was full transparency on the agreed terms and conditions of the study with the

company, with the agreement of the supervisor from Chalmers. The agreement with the company was that the company would periodically review the development of the project and if the findings are not in line with the public image the company wants to display, then the company name and business will not be published in the report. This was the case, and at later stages of the thesis, the name and business were removed with the approval of Chalmers supervisor. The company did not try to influence the thesis in any other way.

4. Results

In this section, relevant empirical findings from the interviews are presented. Generally, from the fourteen-interview data base, the number of interviewees that made a certain statement is provided between parentheses if not stated directly in the text. Furthermore, an analysis of the empirical findings is presented, hence the theoretical background for change identified in previous literature will be compared to our empirical findings.

Below, first the interviewees' perceptions of the changes will be presented. Then the decision making and leadership that took place during the changes will be presented. Those two need to be understood with the communication that is present between all the parts, therefore communication findings will be presented. Communication is relevant not only in relation with changes but as a general tool that needs to be understood in the overall context of the company, that is why relevant findings about general communication in the company are also presented. In the overall context of the company, there are more factors that play a role in change: product and processes as well as culture of the company are presented. Lastly, the general vision of the future of the company is presented since it is relevant to changes as well as to the alignment in the company.

Since the best practices identified in the previous literature (see section 2.5) will be mentioned in relation to the findings, a summary of the best practices will be presented at the end of the chapter.

To summarize, our main findings are as follows:

- The company has generally not followed the best practices.
- The product complexity, leading to different problems, hinders changes in the organization.
- Learnings are occurring but the lack of processes for handling them makes them irrelevant.
- Communication has not been efficient, as it is identified that the message emitted was not the same as the one the recipients understood.

4.1 Change One: Understanding, Support & Implications.

In this section the empirical findings in relation to the first change are presented.

4.1.1 Change Understanding

It was stated by the interviewees that the first change to consider was the change towards cross-functional teams that happened between the end of 2017 and the beginning of 2018, Change One. All interviewees agree on this being the first big change that occurred.

When asking about the general understanding of this first change, including the reason for the company to change, the urgency that characterizes its fast implementation, or how the new configuration or result were, most interviewees (nine out of fourteen) did not fully understand the change in all of those characteristics mentioned above. Managers claimed to have a better understanding than the rest of the interviewees and a manager admits that some misunderstanding was identified among the rest of employees.

As stated in Section 2, a key success factor for organizational change is that there is a sense of urgency among the staff. Seven out of twelve perceived urgency, but did not understand the why it was so urgent, while two others did not perceive any urgency at all. Perceiving urgency without understanding the reason for it is not a source of motivation. But it is possible that urgency was transmitted but that management failed to transmit the sense of urgency, as a manager explained during the interviews that the reasons for urgency were related to the market reaction but also the internal timing for yearly policy deployment. Thus, our findings suggest that there was a lack of urgency regarding the need for reorganization among the staff.

When analyzing specifically who understood the reason for change (eight out of fourteen did so) and what that reason was, the answer is not unanimous, yet it has a similar direction. While managers mention focusing on different segments of the market, reducing work-in-progress, teams having full control of the value chain or improving commissioning speed to deliver value faster, the rest of the interviewees mention breaking silos, be more agile to react faster to customer needs or enable growth as reasons for implementing the change towards cross-functional. Those comments might be leaning towards a common direction, yet, not fully aligned. This is not in line with a comment from a manager who claims that the different teams in the company “understood the purpose and did buy into that”. From the engineering team, one of the teams greatly affected by the change, none of the interviewees claimed to have understood the reason for Change One. As described in the literature review, one of the key points to achieve a successful change is to create a vision and common direction. This can relate to the general vision and mission of the company, but also to the mission of each specific change and the reasons that foster the change. In this case, even though there is a common direction in the reasoning for change, there is not a common story or shared reasons. Misunderstanding of the change is one of the four main reasons for resistance to change (Kotter & Schlesinger, 2008), and it could be argued that in this case, the lack of clear understanding of the change overall could have played a role in building resistance.

4.1.2 Change Support

The general position towards change from the interviewees is positive. Eleven of the interviewees (more than 75%) were positive for the change towards the cross-functional team, at least at the beginning of it. The high positive answer might not correspond with the reality of the employees since in the selection of the interviewees there is a higher percentage of managers than it is in the entire company's structure. Without taking into consideration the manager's

opinion, circa 65% of the interviewees were for the change. If segregating the opinions by the different markets that were addressed with those cross-functional teams, the two already established markets have lower positive support (maximum 50% of positive response) if compared with the new market (80% of positive response). These measurements would need to be corroborated with a bigger sample. It was also mentioned that most of the people against change were people who have been working in the company the longest, but this is not supported by the data gathered through interviews. These figures can be in line with comments from at least two interviewees that mention that even though most people were not against the change, those against were louder and having more influence in the outcome of it. As can be seen in the literature review, Fredberg & Pregmark (2018) argue that in order for a change to be successful it is crucial that there is broad support from employees in the organization. However, according to Kanter et al. (1992) it is also important to convince key stakeholders to be ambassadors of the change, as these key stakeholders' acceptance might be necessary for the change to be successful. Those who were against this change in the studied company might have been lower in number but maybe they were key stakeholders that management did not recognize beforehand or did recognize but failed to convince. Self-interest is a known source of resistance to change since new configurations may lead to less advantageous situations for individuals, being that another of the four main sources of resistance to change (Kotter & Schlesinger, 2008). This situation is more likely to be the case for long-time employees who tend to be key stakeholders, that have kept same or similar positions and tasks for several years, compared to junior or new workers that might still be adapting to the company and the work.

4.1.3 Change Implications

This first cross-functional change was not a change in the organizational chart but mostly just a change of the working processes and teams, meaning staff kept the same superiors and position, but just did work in a different manner. Yet, none of the interviewees changed their desk's position to be closer to the new teams but instead kept the same distribution mostly surrounded by their own team's colleagues. Interviewees belonging to other teams than development, application engineers or management felt very little changes in their tasks aside from being present at meetings, which for two interviewees was often not very productive. For the other teams, there is not a unanimous answer about the implications of the change in the workload or tasks. Many interviewees state that employees, either themselves or others, did not understand their work tasks or new responsibilities when the cross-functional change was implemented; three interviewees did not really know or were unsure if anything had changed, and only three felt that they understood their work tasks. One of the key points defined in the literature review for change is to craft an implementation plan. The findings here suggest that there was no implementation plan, or at least that no plan was widely in use or available to everyone. Crafting an implementation plan is necessary in order for employees to have a clearer understanding of the change and its expectations/ outcomes (Kanter et al., 1992; Hiatt, 2006; Bridges & Mitchell, 2000).

It is also mentioned that the old meetings for each old functional team were still happening or were reintroduced shortly after the cross-functional teams were introduced because there was a need to cross-check with the other people working on the same products, creating additional burden. Another source of uncomfot for some developers (three) was that, with the new configuration, all responsibilities were given to each individual representing the team in each cross-functional team, while before they were given to the whole team. Therefore, each developer had the responsibility of delivering the full value of his/her function without the support of his/her colleagues. As argued by Kanter et al. (1992), the implementation plan should be very detailed with information concerning work tasks, new meeting schedules, outcomes, objectives or target aim with the change. Those empirical findings show that if there was an implementation plan, it was not clear for many employees what were their new tasks or new meetings or even the goals. However, our findings fail to explain if this situation is reached because of the lack of an implementation plan or because of the lack of clear communication of it.

From the literature review, another key point for successful changes is to separate from the past (Kanter et al., 1992). This can be done in many ways, some of them by relocating personnel inside the office space or by setting new ways of working and breaking with all meeting and habits. According to the empirical findings described above, this was not the case in this company. There was little change in everyday tasks and life for many employees and, though a total disruption might not be best, clear actions to separate old routines to new processes help create the right mindset for change. Simple things as rearranging people inside the office also help to develop enabling structures, like cohesive teams, as described in the literature review.

4.2 Further Changes: Definition & Understanding of changes

Since the very first interviews, it was clear that not all interviewees had the same opinion about what changes have occurred or when did those happen, turning the perception of changes itself an interesting topic to investigate. Regarding the change following the cross-functional change, while most interviewees (ten out of fourteen) considered going backward from the initial cross-functional change to a status similar to the one previous to Change One as a change, some (four out of fourteen) did not identify this as a change.

The exact point in time when the cross-functional change was to some extent reverted is a point of disagreement. While some (two) mention that Change One was in place as little as four weeks, others (three) think they did not change back until six to eight months later, at some point around summer, and another two mention it happened two months after implementing it.

A kaizen event as it happens at this company is a framework for discussing further improvements where a specific time and participants are assigned. Therefore, the kaizen event is a tool for creating change. The event has a predefined structure and specific outcomes are expected. From those interviewees who did not identify moving backward from cross-

functional teams as a change, two identified the change established during the Kaizen event after summer as a change, and another two just did not identify any other big change than the cross-functional change. Overall, the changes that were established during the kaizen event are identified as a change by nine interviewees. From those nine interviewees, six directly participated on the kaizen event and three did not. In other words, from those not directly involved in the Kaizen event, only three out of eight did identify the kaizen event as a change, in contrast with all participants of Kaizen events identifying it as a change.

Another event mentioned (eight out of fourteen) as a relevant change is the PD initiative of 2019. All interviewees that were directly involved in the PD team identified it as a change, while only two out of the six not directly involved did identify it as a change.

What is important from those empirical findings is that they show employees lacking a common vision of what the situation of the company is. Employees are not aware of changes or of when are those introduced or reverted. The different interpretations of what is a change or not, or when it happens reflects a misalignment in the information that the different employees have. Findings show some relation between being involved in a change and identifying it as a change. The lack of common understanding of the situation of the company is likely to be symptomatic of a different problem. It could be argued that communication was failed to spread the changes, something that will be analyzed in a following section, but other reasons could have played a role in this misunderstanding. As it was mentioned before, there was little separation from the past between the different changes; more clear separation could have helped employees to identify each change. The deployment of a clear implementation plan would have help people identify changes and stages of changes. Regardless of the reasons for the lack of common understanding of the changes, Fredberg & Pregmark (2018) argue that in order for a change to be successful it is crucial that there is broad support from employees in the organization: this is only possible if employees are fully aware of changes. Also described in the literature review, one of the key points to achieve a successful change is to create a vision and common direction for changes (Beer et al., 1990). Findings show that employees are not fully aware of changes, so it could be argued that they are possibly lacking the understanding of it either, as happened for Change One. All this misaligned information is in part preventing changes of being successful.

4.3 Leadership and Decision Making

In this section the findings about leadership both in relation with change and generally in the organization are presented, as well as the findings about the decision making for the changes.

4.3.1 Change Leadership

For most interviewees (nine out of eleven), except for management, it was not clear who was leading the changes. In general when facing this question, most if not all interviewees reacted

with doubt and took some time to reflect on it before answering and in most cases (nine out of eleven) were not able to pinpoint a clear leader for each change, except for Change Two, going back from cross-functional teams, for which most agreed that it was a consensus decision with many people involved, still without a clear leader. Management has a clear answer to who led Change One towards cross-functional, but they rely on a group effort more than on a visible person or few people leading the change. Also, one manager mentions that it was maybe not that clear to employees who was leading that change.

Strong leadership and a visible person or people assuming the leadership for change is key according to Kanter et al. (1992) & Luecke (2003). Empirical findings show that most employees are not able to identify a leader or leaders, which is playing against the success of the change. The fact that most interviewees cannot directly pinpoint to a leader for changes can be related with the communication of the change, with the nature of leadership itself, or even with the lack of clear leadership.

When asking more in detail about the change towards cross-functional from the leading perspective to management, there are some points worth mentioning. It is suggested during the interviews that not everyone in the top management team was fully engaged with the change, which was mentioned (two) as a fact that could affect the people on his/her team to be more disengaged or even against the change. When asking management about it, it was clear this is a pain point for management. Because of it being a sensitive topic, answers were elusive and not valuable findings can be mentioned.

Moreover, four out of eleven employees mention that management perhaps gave up on the initial change too fast, which is also supported by three managers who explain that the feeling was that management did not endure long enough and gave up too soon.

4.3.2 General Leadership

In relation with leadership, at least four interviewees (none of which from the engineering department) mention that leadership should be more strict with the decisions taken. It is also mentioned (two) that the growth in the size of the company requires different leadership methods, making the growth of the company a challenge for leadership. It is mentioned at least twice that managers are afraid of losing people, and a manager himself mentions that the management task is often to find a balance between logical business decisions and still making people happy on their workplace, a reflection shared by an engineer.

Not only management but other members of the organization mention the difference in importance of teams or people. For instance, after the Kaizen event, there were roles to be fulfilled, some of those still unfulfilled, and the usual comment to it is that the most important roles are fulfilled, which identifies that there are different levels of importance between teams. This could relate with a need for more strict management since one of the reasons mentioned for the roles not being fulfilled is simply that people do not want to get those responsibilities,

but there is no sign of management pushing for those to be fulfilled. As several authors argue, reinforcing and institutionalizing change is important and also that happens at a later stage of a change (Kanter et al., 1992; Kotter, 1996; Luecke, 2003; Beer et al., 1990; Hiatt, 2006). In this case, it could be argued that it was difficult to do so during Change One since it was fast reverted, but it could also be argued that a stronger management could have reinforced the change and set it as a new standard. In regard to the roles created in the Kaizen change that are still to be fulfilled, a lack of reinforcement of the change is shown as roles still open several months after. However, this situation can also relate to the monitoring and adjustment in response to change problems, another of the key practices for change described in chapter two (Beer et al., 1990). This specific best practice could be seen in a short or large view. From a short view, the fulfillment of the empty roles might not have been properly monitored and adjusted, or the first cross-functional change was not just adjusted but instead reverted. However, from a long view, the first cross-functional change was monitored and due to some problems, adjusted to be taken in smaller pieces, that would be the consequent smaller changes that have taken place. Monitoring is a task not only for managers but for anyone in the company, and there is no specific evidence that anyone else than management is taking relevant monitoring action; yet, the lack of early involvement of people other than managers in changes could prevent other from taking actions like monitoring.

Lastly, some interviewees (three) mention that the lack of technical understanding from some managers affects leadership negatively. At least five interviewees claim that there is some lack of understanding of the product or the technology from some parts of the managers, including product managers. It is not an unusual perception from developers in technology-driven companies where managers are perceived as less knowledgeable of technicalities. Yet, it does not necessarily need to be the case, especially considering that four of the managers (including product managers) interviewed have been developers themselves.

Management knowledge of the product and its technicalities is also mentioned (two) to influence the trust in management. Trust in management was not clearly affected by the changes. Generally, at least six interviewees (out of eleven) clearly claimed to trust the management team, being two of them from engineering, while only two interviewees clearly claimed the opposite. The general relation with top management is stated as good five times and bad only twice. A common resistance to change source is the misunderstanding of the change and the lack of trust. Even though it has been argued that a clear lead for change was missing, and therefore it is more difficult to trust and understand changes, the fact that the trust levels in management is high is probably a good buffer for resistance to change.

4.3.3 Decision making

Starting from the decision making for the initial change towards cross-functional, nine out of eleven interviewees were not involved at all in the decision making and seven out of those felt bad about not being involved, while other two did not care about it. From the interviewees, only

the three managers were involved in the decision. Management mentions that external consultants were brought in to assist and support the management team in making decisions for the cross-functional change as well as educate the company in agile processes. Bringing in external help is a good sign for developing enabling structures, one of the key points for successful change, as described in the literature chapter (Hiatt, 2006). A manager states that, disregarding their own concerns, consultants really convinced the management team to go cross-functional for the entire organization. Kanter et al. (1992) explain that a possible method of developing enabling structures would be to have pilot-tests so that only one part of the organization is tested and verified before the entire organization is addressed, a view shared by two interviewees. It could be argued that even though the first cross-functional change was deployed for the whole company, guided by the expert's advice, later on during the policy deployment of 2019, management decided to try again a cross-functional team in a reduced scale. That approach would be more in line with the theoretical best practices towards a successful change.

At least two people were involved during the implementation process of Change One. Management (two) claim that they include some people from outside of management into the creation of the implementation plan, and one of the interviewees was part of it. A manager shared the opinion that people felt the change was pushed on them and that they did not feel involved in the process. It is also claimed that unequal competences inside teams were a problem that was not planned for and uneven distribution of knowledge lead to double meetings with old and new teams. While some interviewees claim changes were to some extent pushed to them, managers instead claim that a lot of preparation was done. The decision was discussed for a couple of months before the decision was taken in late September, early November, starting then the planning of the implementation, and being officially announced and implemented at the end of the year 2017.

In the case of the change backwards from cross-functional, it is mentioned (six) that it is a group of people who took the decision based on the disagreement or on people reaction from the previous change. As mentioned above, for the change started at the Kaizen event and the PD initiative of the year 2019, more people were involved in analyzing the problem and finding solutions.

The very first step defined by many authors as relevant for a successful change is to analyze the organization and its need for change, as mentioned in chapter two, but to do that involving different level employees. According to Kanter et al. (1992); Luecke (2003) & Beer et al. (1990) including employees in the decision phase is a tool for improving engagement and commitment to change. The empirical findings suggest that there was little involvement from people outside of the management team, especially for Change One, in the decision process. This probably decreased the engagement and involvement of those not involved in the change. Not just that, also valuable knowledge and suggestions from other levels of the organization were just not considered, missing an opportunity to create greater improvement and innovation. Kotter &

Schlesinger (2008) mention that different assessments of the situation by employees compared to managers could be one source of resistance. Involving different people in the decision making would put different assessments in the table to be used to make a correct decision that will, in turn, reduce resistance to change at later stages.

4.4 Communication

In this section, the empirical findings in relation to communication are presented, both for changes and generally in the company.

4.4.1 Change Communication

In relation to the change towards cross-functional teams, Change One, a manager claims the change was properly communicated through different channels and using defined methods, but other two managers also admit that, in retrospective, maybe the message was not properly received and communication of the change could have been done better (two out of three managers expressed concerns about the employees' understanding). From the rest of interviewees, there are two claiming that communication was well handled, and none claiming the opposite. While most interviewees do not remember or mention clearly how the change was communicated, the few who do, mention an event where functional teams were created as the communication method (three out of five) or an all-hands meeting (two out of five). All-hands events are meetings where all members of the organization are present and where most of the alignment happen as managers explain the overall activities and goals for the company as well as the main recent achievements.

In relation to Change Two, most interviewees (eight) do not remember any specific communication that mentioned that the change was partially reverted. Those people felt it just faded out at different points of time, or realized they did not have to attend to cross-functional meetings anymore (three). Only two people, including one manager, mention that it was communicated during an all-hands meeting.

In relation to Change Three decided, three interviewees, all of them part of the Kaizen event, mentioned that Kaizen events have a clear communication structure in its process and therefore the communication of that change was better than for previous changes.

Regarding the last change, Change Four, there are three interviewees arguing that communication was badly handled. Specifically, it is mentioned that the change was not communicated until it was too late, and people were aware of the change through other people who were to be included in the PD initiative and not from the managers' formal communication.

As an overall, findings show that communication for the first, second, and forth change as described above, were not sufficient. That relates to the general misunderstanding of those changes, specified in the sections one and two of this chapter. The unclear communication of

Change One can explain the range of different opinions about the reasons for implementing change. Management identified as a key learning that communication for the first change was insufficient, as is stated in the learnings section of this chapter. The fast pace of Change One can explain the lack of time to have a proper communication strategy, which affects the overall communication of the change. The apparent lack of clear communication of the second change relates with the fact that there is a complete disagreement on when this occurred and even if it occurred at all or not, as was described in the previous sections mentioned.

4.4.2 Overall Communication

Independently of the changes, the general opinion about communication is that it is bad or could be improved (more than 80%).

In relation to communication with managers and top management, there are different points of view. At least three interviewees mention that often the information about changes or decisions from management is received by colleagues instead of by formal management communication and that only the people directly involved in changes get the information about it while the rest are not informed about what is happening, not even in general terms. One interviewee claims that it is not only that management is bad at communicating changes, but also that management is not aware of how bad they are at communicating changes. In opposition, managers perceived change communication as well handled and one manager claims they are putting a lot of effort into it and he is convinced that employees get the information. Those comment add to the ones in the previous section regarding some changes where only those who were involved perceived communication as good, or where even it is mentioned that many people knew about changes through other people involved instead of from management. Kanter et al. (1992) emphasize the importance of communicating and involving people, as it often creates a personal stake for the employees. Even though a lower level of engagement is needed from those who are not directly involved, in a company of this limited size with such an intertwined product, it is likely that a change in any part of the company, especially in engineering, will affect many more than those involved. Therefore, the support and engagement of everyone would be beneficial, not just during the change, but also long term to be aligned with the overall mission and vision of the company.

A manager mentions that sometimes it is not ideal to communicate an idea directly to employees in the initial stages since it can be perceived as an already taken decision when it is in fact not a decision but just an idea. On the other hand, what has been found to be the case is the lack of information and proper communication. As described in chapter number two, communicating (Fredberg & Pregmark, 2018) and being honest (Kotter & Schlesinger, 2008) are two ways that could help reduce resistance. The empirical findings above suggest that communication has not always been honest or effective.

There is a general agreement (ten) that communication between teams or departments is not as good as it is within teams or departments. Within teams or departments, there is tight and good communication, and there are good discussion forums. The knowledge is easily shared and spread within teams, while it is much more difficult to share between different teams. It is even mentioned that there is a “us vs them” mentality between teams. Two other employees mention that communication between teams or departments only occurs when completely needed and usually late and even that teams are at risk of isolating. Lack of communication between departments can end up affecting directly the end customer since it will lack the communication on time as well. In the specific case of teams within engineering, it is also mentioned by some people (three) in engineering and product management that communication could be improved by adding a design phase where all teams would discuss and agree beforehand instead of after starting the development. It was also mentioned at least twice that the cross-functional teams helped improve communication between teams and departments and those new communication channels are still open after the cross-functional teams are not in place. It is also mentioned that one cause of bad communication between teams could be the lack of internal documentation within teams; while teams have in general a good communication, it is mostly spoken, and therefore it is difficult for someone from outside to know what is happening inside teams or why decisions are taken. In relation to documentation, most interviewees (two) do not know if there was any documentation for the change towards cross-functional or believe there was none, instead any doubts could be asked to anyone involved. Yet, the lack of written documentation was not perceived as a problem. As mentioned above, crafting an implementation plan is one of the key points mentioned in the literature chapter. However, in this case, any type of plan, independently of the precision of it, was not documented to serve as a support for employees to check. According to Fredberg & Pregmark (2018), clear documentation can also reduce the resistance to change by creating better understanding and building trust.

4.5 Product and Process

The interviewees tried to investigate how complex the product is and the reason for this complexity, even questioning four additional people outside of the fourteen initial sample, in order to get an answer for that specific question. The interviewees mention that there are different development teams, and that it has been like that almost since the start of the development of the product around 45 years ago. Each team is responsible for each of the products or components they develop, and the teams develop those almost completely independently from other teams, only cross-checking at the testing phase, which can incur in late changes and delays. Those teams even work in different programming languages, even though they have multiple overlapping functionalities (but often with different syntax).

It is often mentioned that the fact that the product has been in development for 45 years means that there is old work, code or structure, included in the current product. This is seen by some interviewees as a legacy that is slowing development due to the need of high maintenance as

well as the added complexity when developing new features. In addition to that, it is mentioned by two interviewees that there is pride in the code from those who have developed it (not the ones claiming that), enhanced by the fact that each individual is responsible for their own piece of software, which means few variations from other people are usually allowed in their codes. It is claimed that the product is so complex that there are only very few people who know how it all works in detail.

After all the enquiries, it was not possible for the interviewers to get a better understanding than accounted for above of the product and its complexity, which can explain the difficulty other members in the company might face when trying to get more knowledge about the product and its technicalities. Actually, it is claimed that in each team inside engineering, the members do not own the same knowledge, instead there are some senior developers who have a strong knowledge of the product overall, while the newer team members are usually more focused on different areas of expertise.

With that mentioned, nine interviewees claim that the current product structure and complexity hinder changes. Especially big changes like the cross-functionally reorganization are argued to not be possible with the current product structure. At that point is where the disagreement between keeping the old configuration or renew it starts. At least eight out of fourteen interviewees clearly expressed that the old code and structure is problematic.

It is important to explain how the current product structure is argued to hinder change. Even though the technical details are complex to understand, it is claimed that it is that complexity that prevents the structure for supporting new configurations. On the one hand, its complexity prevents people from understand it. Evidently it is a complex technical product that not everyone should understand, but according to some, it is overcomplicated. This complexity that prevents its understanding is creating the already mentioned uneven distribution of knowledge inside teams where only few senior developers have a clear overview of the product and understand it, while the rest have a partial knowledge. In that scenario, even though many developers can interact with the system, only few can understand its full implications. This means that all people focused on one product area are depending on a specific senior figure for checking up the development against the whole system. This clearly prevents different configuration in the organizational structure than differ from the current development structure divided by expertise areas. On the other hand, the complexity of the product is also caused by the product being highly intertwined. This implies that minor changes in some areas might have implication in other areas meaning not only that changes are more complex than expected but also that developers might be more conservatives in performing changes. This prevents configurations where changes need to be quickly performed and released to be successful.

This tight relation between the product and the organization structure can be a case of organization mirroring. As explained in chapter two, some organization structures mirror the product structure, being this a key element in reorganization. It could be argued that this is the

case in this company, where the development structure is to some extent mirroring the product structure, and for different reasons, including the uneven distribution of knowledge, a different organizational structure with the same product architecture seems unlikely to succeed.

Even though theoretically the development is done in a scaled agile framework (SAFe) environment, according to the description of the development as well as to some comments from two interviewees, the development is not agile but waterfall to some extent. This is actually aligned with a product differentiated in components or subparts of the product with different teams for each one that are responsible only for each part and rarely for the overall result. This development processes could influence the successful implementation of different configurations.

Overall, this configuration of product and processes results in a really versatile product that works in many different applications and that is high in quality and hence highly reliable. These characteristics meet the demands of the traditional market that the company has had most of its lifetime. Yet, as mentioned by at least four interviewees, the current market for the company is divided in two different areas with different needs. That is what in the first place motivated an organizational change so that the company can enter new markets and solve different customer needs.

As Kotter (1996) & Hiatt (2006) argue, it is very important to enable structures for supporting changes. The empirical findings suggest that the product structure is quite rigid and does not enable any different configuration than the current one. This could be changed by changing the product or development configuration, but at a high cost and risk that prevents managers from doing so. The risk is not only from a technical or business perspective, but from the fear of reactions from developers. The already mentioned uneven distribution of knowledge within development teams create an uncomfortable situation for current team members when they are set in a different configuration, as happened for the cross-functional teams. This is one known source of resistance to change, as defined in chapter two, that makes individuals look for each own best interest and therefore prefer the already stable and known situation. Same reasoning can be used for preventing the team members to rearrange within the office according to new configurations, as happened for the cross-functional teams: the high complexity of the product and its old legacy prevent all developers to fully understand the part they are involved in, except for senior experienced ones, leading to a situation where individuals are completely dependable on each product team to deliver value, hence preventing the change of location to somewhere farther away from the product team. However, a different product configuration could also solve this problem by creating a more open structure and product.

4.6 Culture

The culture of the company is generally perceived as positive (twelve out of fourteen). It is frequently mentioned (eight) that there is a helpfulness mindset where people is happy to help

others and people feel they can ask colleagues for help. Other frequently mentioned characteristics of the company culture are openness (five), fun environment (five), and happiness at work (two). It is also mentioned by three interviewees that there is a strong engineering focus and a lack of customer focus. This was identified as a problem and it is mentioned (two) to be related to the difficulties for creating cross-functional teams with a focus on customers or market areas instead of in engineering areas. It is also mentioned (three) that there has been work done in the past to identify and improve culture, which can explain why there is a clear aligned answer for that question.

The general positive attitude towards culture probably impacts the motivation of the employees. Every interviewee asked about motivation (twelve) responded that she or he is motivated or motivated most of the time.

4.7 Learnings

While seven interviewees claimed to not have seen any learnings about the changes from top management, only three claimed the opposite. A manager claims that they have learned and even though management has not communicated that directly, this manager claims that management has shown their learnings through actions taken. Yet, another manager admits that errors committed during Change One, from which they learned from, were later repeated at a later change, which was mentioned by other three interviewees.

The main learning that the three managers share is that communication is never enough and that there is a need for improvement in this aspect. Another learning mentioned (two) is that during the change towards cross-functional, they were lacking key influencers to support the change. Other learning mentioned are, among others, the need to give more time for changes to settle, the need to invest more time for communication, the need to have the right people with the right mindset on board, or to address the more senior key influences earlier in the change.

One key finding is that there is no process for handling learnings from changes. While for some other aspects there are processes for learnings, two managers claim that there is no process for handling change management learnings. In other words, there is no specific way of reporting learnings and checking those before implementing new changes.

4.8 Future and Vision

The interviewees were also asked about where would they think the company would be in five to ten years. Most interviewees (twelve out of fourteen) admit that they did not really know, or were hesitant about giving an answer, including one manager that admitted that he should have a clear answer to that question given his position. The other two managers had clear answers about goals and ambitions as well as a vision for the company. Even though the vision of the future is quite different for each individual, still in eleven of the cases, something is mentioned

as a condition for future success, which could be understood as the uncertainty of the company being successful unless what is mentioned happens. The trigger for success mentioned is related to the market and growth of the company in five cases, and related to technologies, quality, and research and development in another seven cases. At least two interviewees have claimed that the vision has not been communicated, at least not clearly. In contrast, a manager claims that the main thread for a bright future is the competition, also claiming that everyone in the company understands this and the changes in the market. Also, according to him, everyone in the company has the same picture on that perspective. However, more people feel the problems to overcome in order to be successful are internal and not external. Aside from managers, five people understand the thread from competitors, but six do not fully understand it as it is explained by managers. This could be related to the quality of the communication of the vision for the future of the company.

Interviewees from engineering (three) mention that when management talk about vision, they mention growth, but fail to provide further details. As one of them mentioned, management often speaks about markets or market shares, and to this employee, it is difficult to translate that to something he understands and something he can actually work towards. As mentioned above, for some employees, the culture can be focused on technology more than in customers and markets. When the main points of the mission and vision are expressed in terms of markets, if those are not in the main interest of the person receiving the message it is unlikely that the person would give them the importance they have. If instead, those goals would be in technology focus, probably those with strong engineering-focus would pay more attention and engage in achieving those easily. An example of both how much the culture is technology-based and how little can people understand customer and markets at times is that most of the triggers for success mentioned in the interviews conducted pointed to technology matters, as described above. In that sense, it could be argued that even a good communication would not assure the desired understanding in all employees unless a cultural shift is made.

It is mentioned by managers that competition is a key factor for the changes as well as the positioning that the company wants to achieve in the long future through its mission and vision. Still, most interviewees, except for management, do not fully understand the threat of competitors or do not consider it one of the biggest risks for the company.

Creating a vision and a common direction is another of the main points found in the literature for successful change, and not only that but also to achieve correct alignment and efficiency in the company, as mentioned in chapter two (Kanter et al., 1992; Beer & Eisenstat, 2000; Hiatt, 2006). Our empirical findings show that more than 85% of the interviewees do not have a clear idea of the mission and vision of the company, which relates to the lack of alignment that has been seen during changes.

4.9 Analysis of the Findings According to the Eleven Best Practices

According to what has been specified in the literature review in chapter two, there are eleven best practices defined that, if followed, will help firms to implement changes successfully. Those eleven have been already mentioned above together with the relevant empirical findings. In order to have a better overview, the eleven best practices and a brief description of how accurately or not they were followed is presented.

- *Mobilize energy and commitment through joint identification of business problems and their solutions.* The findings suggest that the analysis and the decisions for changes were mostly made by management with little involvement of other members of the organization, leading to low commitment. However, an improvement in the latest changes is perceived when those who are to be part of the change are involved in the decision process much earlier.
- *Create a vision and a common direction.* There is little common vision or direction shared in the company, either if it refers to the short-term change or to long term goals. A common mission and vision exist, as managers can explain, but the knowledge is hardly spread in the organization. Similar results have been found for the vision of Change One.
- *Separate from the past.* There are few findings suggesting any separation from the past. In fact, it does not seem to be something that management took into account during the changes.
- *Create a Sense of Urgency.* Management struggled to create the desired sense of urgency. Even though urgency was identified, the sense of it and a reasonable explanation was not found to be spread among the staff.
- *Support a Strong Leader Role.* For Change One, the findings show that there was no clear leader identified for most employees.
- *Line up Political Sponsorship.* It is already mentioned by managers that in regard to Change One, management failed to include and look for the support of key stakeholders to have sufficient support during the implementation process of change. That was, however, taken into consideration during the following changes, improving the outcome.
- *Craft an Implementation Plan.* An implementation plan was either lacking or not communicated to the staff. Even though it is likely that management have talked about or even created a draft of some plan, it is not available to most employees, and employees do not know where to find written information. This was especially true and relevant for Change One, improving for the kaizen change, but similar for the last PD initiative of 2019.
- *Develop Enabling Structures.* Some enabling structures have been introduced, for example usage of external help to improve agile knowledge, usage of the already established SAFe framework, or a trial cross-functional team that the last PD initiative can be seen as.

- *Communicate, involve people and be honest.* Communication has been identified as a problem since what management claim to have been communicated is not always understood by most employees. Involvement of people has been lacking as well. Honesty has always been preserved but keeping news for too long time have turn out being counterproductive for management. Managers have been too conservative at keeping ideas from employees to avoid misunderstandings, yet it would be better to be honest and communicate too much, than employees being under communicated and receiving information by colleagues instead of from the proper information source or management.
- *Reinforce and Institutionalize Change.* Even though changes have been short-lived, for those that have lasted longer, such as the SAFe framework after the Kaizen event, it appears that lack of reinforcement by management is leading to a change that is not fully complied.
- *Monitor and adjust strategies in response to problems in the change process.* If looking at this practice from a short-time range, the company has done little monitor and adjustment of each of the changes before changing them completely; while if looking at this from a long-time perspective, the company has started with an ambitious project aiming to achieve the big change by breaking it down into smaller changes.

5. Discussion

In this chapter the main findings will be discussed in relation to the previous literature, validity and generalizability.

As mentioned in the introduction, a company trying to implement change is playing against the odds: it is commonly said that around 70% of changes fail (Tasler, 2017). Hence, the studied company already had the odds stacked against them when they initiated changes in the organization.

One of our main findings is the issue of communication in the company. Although the management team claimed that they had communicated changes clearly and many times, employees claimed that they did not understand the changes or the implications from them. This topic of communication issues, or arguably a misalignment between what management communicates and what employees interpret, is not specific for the studied company. Theory confirms that communication is a topic that many companies need to address. Moreover, we identified that in the studied case the mission and vision of the company is not clear to many employees, leading to employees not being fully aligned with the view from management. However, managers in the company seem to struggle with finding out exactly how effective the communication really is at the moment, and it was not until seeing the consequences of lacking good communication after the changes were implemented that the efficiency could be evaluated.

Hence, we argue that managers should stay more alert when receiving feedback, since misalignment in the communicated message from management and the received message from employees will always occur. This could reduce the source of resistance to change in the future, or simply the frustration that was present at the cross functional change that the company initially aimed to fulfill. Therefore, we argue that the studied company, as well as other companies that are aiming at implementing organizational changes, should first consider the existing quality of communication, and if needed, improve it before proceeding with any organizational changes, which are highly dependent on communication.

Moreover, it was identified that the product structure was very complex as the code has been developed over decades, requiring additional efforts of several different teams for performing small tasks. This complexity leads to only few senior people at the company being able to understand the entire product in all its depth. It also leads to rigid team structures around the product structure and consequently to a difficulty of performing changes. Mirroring organizations theory explains the dependencies between the technical architecture and the organizational structure (Colfer and Baldwin, 2016). This means that changes in the product architecture will lead to changes in the organization (Colfer and Baldwin, 2016; MacComack, Baldwin and Rusnak, 2012). Yet, Colfer and Baldwin (2016) explain that sometimes changes in the organization failed due to the unidentified technical interdependencies. Our empirical

findings suggest that this could be the case in the studied company. Some suggestions from the authors to “break the mirror” are to introduce modularity or simply increase technical independency (Colfer and Baldwin, 2016; MacComack et al., 2012). This finding might be relevant to other companies with a product which possesses a rich history of old development that is not in line with today’s needs.

The previous literature on success factors for organizational change fails to identify mirroring or product complexity as a pitfall. Thus, our findings – together with insights from the literature on mirroring – suggest that the literature on organizational change should take these issues into account. As seen in section 2.4, the previous literature offers several ‘check lists’ for successful organizational change. We suggest that any future lists of this kind include a step stressing the importance of taking product complexity and mirroring into account.

An interesting question then is how companies experiencing the burden of a complex product affecting the whole organization can overcome this obstacle and perform change. We touched upon the literature of ambidexterity discussing the situation when a company wants to explore new markets or business opportunity, but the current exploit structure, including culture and product, hinders this change. A similar case is found in this company where there is a need to find the balance between the exploration of new markets and the exploitation of current ones. The initial change the company aimed at fully transforming the entire organization into cross functional teams, which were trying to boost capabilities related to the explorative part of the company, but they experienced several difficulties and resistance from employees arguing that the product is not built for that. Later on, the company decided to instead switch the approach and created one single cross functional team that works independently but inside the existing organization, which is currently performing better than the initial cross functional change and experiencing less resistance. Hence, we argue that this is comparable with ambidexterity theory and that the management team switched their approach from trying to implement the change in the incumbent organization, to creating a new team that is operating outside of the incumbent organization and thus not as affected by the incumbent processes and structures hindering the change. If this new team configuration brings the right balance between exploration and exploitation, the company will succeed in keep exploiting the current business and still have enough resources to explore new markets, the original goal with the first change. Therefore, we have identified that other organizations that experience difficulties in implementing change can use theory about ambidexterity to change the approach in order to reach a more successful organizational structure.

Best practices were not generally followed. This is another main finding. Our findings do not reveal whether management knew about some best practices in the field but failed in the execution of those, or if management just was not considering any frameworks. Regardless of this, best practices were not followed in many situations and this possibly impacted negatively the chances of success, according to the theory described in chapter two. However, management sought expert advice for some of the changes, showing that there is a desire to work with

expertise knowledge, but failed to achieve so. While implementing best practices is complex since those need to be adjusted to each situation, the failure in the implementation of best practices brought by the experts should not have prevented the company from keep seeking for best practices. This is also useful for other companies that have failed after using some expert advice or best practices once, since several theories present steps for a successful change and it is important to make an effort to find those and adapt them in order to improve organizational change outcomes.

Another relevant finding from the study is the lack of processes for handling learnings from change. While learnings did occur, and possible improvement were identified, the lack of proper processes to record those, and check them later, prevent those learnings from being useful. This is a situation other companies can find themselves at easily, but a proper process for handling learnings can improve the quality of future changes. This is especially relevant for changes since the general success rate is low, implying that several changes will be tried before one success, and therefore all learnings contribute to final success.

Also relevant to mention is that the company in the study is currently experience growth. That is a change itself that affects the organization and challenges management and leadership, one key point for organizational change. Growth can, for instance, affect communication. While some type of communication would be sufficient for a company with thirty people, maybe it is not enough for a company with seventy people. Similarly, a product structure in which ten developers could work on might not be enough to support the work of twenty developers at a time. Hence, growth just present an additional challenge to the already complex organizational change.

6. Conclusion

Change design and implementation in a company is a complex matter. Our study illustrates how difficult it is for leaders and managers to fully understand the complexity of organizational change and plan for all the possible scenarios or outcomes. However, companies still need to keep changing in order to thrive not just in the present but in the future.

This thesis tries to shed light on problems related to organizational changes. As organizational changes are complex, this study focuses on one specific company bringing one more example of how organizational change is practically done in real organizations. The perspective of the study has been focused on analyzing how real changes happen and how it affects many different aspects of the company.

The previous literature offers some key actions that improve the success rate for companies during change. However, one of the main findings of this study is that the organization did not generally follow the best practices in the field. Even though management tried to get expert help, at the end they still failed to get deeper knowledge about the field of theory and apply common best practices. This is an interesting topic for future research: if companies are aware of best practices and if so, how often do they follow them.

Another interesting finding is how communication, a key aspect for change, was not efficient. There is a mismatch between what management communicates and what the main body of employees know. Some tools to evaluate the efficiency of communication and improve them would help not only just communication but changes performance.

In fact, after the first change, management identified communication as something to be improved in future changes, yet, communication was not better perceived in future changes. The interesting finding is that this learning, as well as many other, did not follow any process for handling and store them so that they can be used in the future to improve changes outcome. As companies go through many changes in order to be successful, it is therefore also important that they manage the many learnings that they accumulate during changes so that the same mistakes are not repeated in future changes.

Another relevant finding in the studied organization is that the product structure and complexity was hindering change. Due to how the structure and processes have historically being built around a specific intertwined and rigid product structure, any changes on any on those aspects present a challenge for the stability of the organization. The theory regarding mirroring organizations explains that organizations mirroring product architectures can end up failing at organizational changes if that is not considered. Yet, in the literature specifically addressing success factors for organizational change, we did not find many studies emphasizing mirroring or product structure. Thus, we recommend that future literature on success factors for organizational change takes this into account.

Despite the complexities, organizations still need to evolve and try new scenarios, which can lead to difficult situations that ambidexterity can help explain when companies try to achieve a balance between exploration and exploitation. We see that ambidexterity can explain the struggle the company is experiencing in finding a successful organizational structure in order to be able to explore the future exploitation markets without diminishing the current business. While ambidexterity focusses on the problem of finding a balance in the resources between exploration and exploration, we see examples in the literature that are usually focused on the introduction of new technologies, but there are not sufficient literature about balancing resources while sharing common technologies or products. This topic is of interest and future research could bring more light to this type of scenarios.

In general, these findings have implications not only for the company in the study, but also to any technical company that is facing the challenge of implementing organizational changes. It is especially relevant for managers that are struggling to understand the implications and complexities of change in their own companies, and for companies planning an organizational change and whose product is complex and might be mirrored by the organization.

7. References

- Abusabha, R., & Woelfel, M. L. (2003). Qualitative vs quantitative methods: Two opposites that make a perfect match. *Journal of the American Dietetic Association*, 103(5), 566-569. doi: 10.1053/jada.2003.50129.
- Beer, M., & Eisenstat, R. A. (2000). The Silent Killers of Strategy Implementation and Learning. *Sloan Management Review*, 41 (4), 29-40.
- Beer, M., Eisenstat, R. A., & Spector, B. (1990). Why Change Programs Don't Produce Change. *Harvard Business Review*, 68 (6), 158-166.
- Blarr, W. H. (2011). *Organizational Ambidexterity: Implications from the Strategy-Performance Linkage*. Leipzig, Germany: Gabler Verlag.
- Bridges, W., & Mitchell, S. (2000). Leading Transition: A New Model for Change. *Leader to Leader*, 16 (3), 1-60.
- Bryman, A., & Bell, E. (2015). *Business Research Methods* (4th ed.) Oxford, England: Oxford University Press.
- Colfer, L., and Baldwin, C. (2016). The mirroring hypothesis: theory, evidence, and the exceptions. *Industrial and Corporate Change* 25 (5): 709-738. doi: 10.1093/icc/dtw027
- Easterby-Smith, M., Thorpe, R., & Jackson, P. (2015). *Management and Business Research* (5th ed.). London, England: SAGE.
- Fredberg, T., & Pregmark, J. E. (2018). Organization Renewal Through Entrepreneurial Initiatives: When the Seed Changes the Soil. *Research in Organizational Change and Development*, 26, 99-126.
- Galbraith, J. R. (2012a). The Evolution of Enterprise Organization Designs. *Journal of Organization Designs*, 1 (2), 1-13. doi: org/10.7146/jod.6342.
- Galbraith, J. R. (2012b). The Future of Organization Design. *Journal of Organization Designs*, 1 (1), 3-6. doi: org/10.7146/jod.6332.
- Gibbert, M., Ruigrok, W., & Wicki, B. (2008). What Passes as a Rigorous Case Study?. *Strategic Management Journal* 29(13), 1465-1474. doi: 10.1002/smj.722.
- Guest, G., Namey, E. E., & Mitchell, M. L. (2013). *Collecting Qualitative Data: A Field Manual for Applied Research*. London, England: SAGE.

Hiatt, J. M. (2006). *ADKAR: A Model for Change in Business, Government and our Community*. USA: Prosci Learning Center Publications.

Johnsson, G., Whittington, R., Scholes, K., Angwin, D., & Regnér, P. (2017). *Exploring Strategy: Text and Cases*. London, England: Pearson Education.

Kanter, R. M., Stein, B. A., & Jick, T. D. (1992). *The Challenge of Organizational Change: How Companies Experience It and Leaders Guide It*. New York: Free Press.

Kotter, J. P. (1996). *Leading Change*. Boston, Massachusetts: Harvard Business Review Press.

Kotter, J. P., & Schlesinger, L. A. (2008). Choosing Strategies for Change. *Harvard Business Review*, 86 (7), 130-139.

Liao, S., Liu, Z., & Zhang, S. (2018). Technology innovation ambidexterity, business model ambidexterity, and firm performance in Chinese high-tech firms. *Asian Journal of Technology Innovation* 26(3), 325-345. doi: 10.1080/19761597.2018.1549954.

Luecke, R. (2003). *Managing Change and Transition*. Boston, Massachusetts: Harvard Business School Press.

MacCormack, A., Baldwin, C., and Rusnak, J. (2012). Exploring the Duality Between Product and Organizational Architectures: A Test of the ‘mirroring’ Hypothesis. *Research Policy* 41 (8) (October): 1309–1324. doi:10.1016/j.respol.2012.04.011.

Oakland, J. S., & Tanner, S. J. (2007). A new framework for managing change. *The TQM Magazine*, 19 (6), 572-589. doi: 10.1108/09544780710828421.

Shenton, K. A. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Division of Information and Communication Studies* 22(2), 63-75. doi: 10.3233/EFI-2004-22201.

Tasler, N. (2017). Stop Using the Excuse “Organizational Change is Hard”. *Harvard Business Review*. Retrieved online at <https://hbr.org/>.

Todnem, R. (2005). Organizational Change Management: A Critical Review. *Journal of Change Management*, 5 (4), 369-380. doi: 10.1080/14697010500359250.

Zhang, L., Wang, Y., & Wei, Z. (2019). How Do Managerial Ties Leverage Innovation Ambidexterity for Firm Growth. *Emerging Markets Finance & Trade* 55(1), 902-914. doi: 10.1080/1540496X.2018.1526075.

8. Appendices

A. Initial two interviews

Can we record this interview?

Background about the interviewee

How long time have you been working at the company?

At which departments and which positions have you had?

History/ Background of the Company

Would you say that the company has gone through many changes in the past 10 years? (changes in structure, culture, method of working or company layout)

How has the changes in the ownership of the company affected the Swedish organisation configuration? Has it lead to changes?

About 2018

Change 1

What was changed?

What structure and method did the company have before the change?

What problems did the company experience?

Who lead the changes and who was for or against them?

Why did they want to change the structure or method?

What was the desired structure and method by management?

What structure and method did the company have after the change?

What problems did the company experience after the change?

Change 2

What was changed?

What structure and method did the company have before the change?

What problems did the company experience?

Who lead the changes and who was for or against them?

Why did they want to change the structure or method?

What was the desired structure and method by management?

What structure and method did the company have after the change?

What problems did the company experience after the change?

Change 3

What was changed?

What structure and method did the company have before the change?

What problems did the company experience?

Who lead the changes and who was for or against them?

Why did they want to change the structure or method?

What was the desired structure and method by management?

What structure and method did the company have after the change?

What problems did the company experience after the change?

General questions about change

Which learnings from change 1 were taken into account in change 2 and 3? (Also from 2 to 3)

How did you manage the learnings? Do you have a system to manage them or do specific people have the knowledge and use it?

Were similar errors happening in the following changes?

Who is dealing with change learnings? Is it the same person/department that is leading the change or is it independent?

What method is used for change? Did you ask for help outside of the company? Was the method changed over the different changes?

How is the Global company affecting the company in Sweden? (Decision power, influencing decisions, higher ambition and vision, etc.)

Is it planned to have big changes over time, or small changes more often?

Do you prepare changes thinking about they lasting for years or for months?

How depth is the change?

Are there any future plans for new changes or new configurations?

More Abstract

Has the number of employees in the company been growing fast or slow? (per year)

Who should we interview?

B. First interview template for first round of interviews

Introduction (<5min)

- Clarify it is anonymous.
- Can we record this interview?
- Tell us a bit about yourself and your relation with the company (how long at the company, which positions, etc)

Change itself

- Tell us a bit about the changes (changes as they defined them)
 - How would you briefly explain the changes? (Big change or broken down to smaller parts to perform by teams)
Treat each change separately from this point?
 - Did you understand/ agree upon the need for a change?
 - Did you understand/ agree upon the urgency for a change? For example that it can't happen next year but needs to be done now?
 - Did you feel that you were ready (for example right competences/ tools) to act in the new way according to the change?
 - Did you already have enough information and knowledge?
 - Did you get enough information and knowledge during the change?
 - Did you understand what your role was after the change? Did you know who to ask if you were unsure? Was there anything documented that could help? (Is the change established?)
 - What is your general opinion about it/them? Were you against of for it? What was the general feeling and your own feeling?
 - Was it something that you took home with you? That affected your life outside of the company?
 - What happened to you during the change, how did it affect you?
 - Did you use a different process for your own work?
 - Did you have a different team to work with?
 - Were you changed to a different table or location in the office?
 - Did you experience a different attitude towards the work tasks?
 - Did you feel that the workload changed? Increased/ decreased?
 - Did the change break existing personal relationships? Or create new ones?
 - Did the change create uncomfot between employees?

Leadership in change

- How much do you feel that you have been involved/ involved others in the change?
- Who did you feel lead the change?
- Only for top management: if they felt that some managers were really against the new change? How did they react towards that?
- Did you feel that the company learnt from the changes?
- Do you have any processes for managing these learnings? (Knowledge management)
- How do you feel about trust? Do you trust top management's decisions?
- Do you have good relationships with top management? Or management in general?

Culture and people

- What do you think about the culture of the company?

- Do you feel that there is any difference between consultants and employees at the company?
- Which people do you interact with the most?
 - Are those on your team? Or in another team?
 - Do you have close relationships with people or not?
- Is the communication good/ bad? How is the communication?
- How much activities for each team and for the whole organization are organized and how much do those help improving the interpersonal relations between teams?
- With those relation outside of work, do you think those help smoothing the cross-functional tasks? In other words, the fact that you relate with someone during fika or an activity, does this help you to connect with those people when you are back to work and you need help from them?
- Do you feel motivated? Have you feel you have been motivated from the management team? How (an example)?
 - Have you feel specific motivation related to any specific change?

Knowledge management

- How does the company work with knowledge management?
 - Do you document?
 - What do you document?
 - Change documentation? /Learnings

Change in organization

- What was your view of the company prior to 2018?
- What is your view of the company for the future? What is tomorrow going to be?
- Do you feel that you are in a stable environment and then a change happens? Or is the environment a constant change in motion?
 - Do you feel that the company is evolutionizing?
 - Maybe you can give us an example of how the company is evolutionizing?

C. Second interview template for first round of interviews

Introduction (<5min)

- Clarify it is anonymous.
- Can we record this interview?
- Tell us a bit about yourself and your relation with the company (how long at the company, which positions, etc)

Change itself

- Tell us a bit about the changes (changes as they defined them)
 - How would you briefly explain the changes? (Big change or broken down to smaller parts to perform by teams)
 - When did the changes happen?
 - How did you communicate the changes?
 - Do you think it was communicated clearly enough?
Treat each change separately from this point?
 - Did you understand/ agree upon the need for a change?
 - Did you understand/ agree upon the urgency for a change? For example that it can't happen next year but needs to be done now?
 - Did you feel that you were ready (for example right competences/ tools) to act in the new way according to the change?
 - Did you already have enough information and knowledge?
 - Did you get enough information and knowledge during the change?
 - Did you understand what your role was after the change? Did you know who to ask if you were unsure? Was there anything documented that could help? (Is the change established?)
 - What is your general opinion about it/them? Were you against of for it? What was the general feeling and your own feeling?
 - Was it something that you took home with you? That affected your life outside of the company?
 - What happened to you during the change, how did it affect you?
 - Did you use a different process for your own work?
 - Did you have a different team to work with?
 - Were you changed to a different table or location in the office?
 - Did you experience a different attitude towards the work tasks?
 - Did you feel that the workload changed? Increased/ decreased?
 - Did the change break existing personal relationships? Or create new ones?
 - Did the change create uncomfot between employees?
 - How much do you feel that you have been involved/ involved others in the change? How do you feel about that?
 - Who did you feel lead the change?

Leadership in change

- Did you feel that the company learnt from the changes?
- Do you have any processes for managing these learnings? (Knowledge management)
- How do you feel about trust? Do you trust top management's decisions?
- Do you have good relationships with top management? Or management in general?

Culture and people

- What do you think about the culture of the company?
- Do you feel that there is any difference between consultants and employees at the company?
- Which people do you interact with the most?
 - Are those on your team? Or in another team?
 - Do you have close relationships with people or not?
- Is the communication good/ bad? How is the communication?
- How much activities for each team and for the whole organisation are organised and how much do those help improving the interpersonal relations between teams?
- With those relation outside of work, do you think those help smoothing the cross-functional tasks? In other words, the fact that you relate with someone during fika or an activity, does this help you to connect with those people when you are back to work and you need help from them?
- Do you feel motivated? Have you feel you have been motivated from the management team? How (an example)?
 - Have you feel specific motivation related to any specific change?

Change in organization

- What was your view of the company prior to 2018?
- What is your view of the company for the future? What is the company going to be in 10 years?
- Do you feel that you are in a stable environment and then a change happens? Or is the environment a constant change in motion?
 - Do you feel that the company is evolutionizing? (as it is changing its core)

D. Interview template for employees

Introduction (<5min)

- Clarify it is anonymous.
- Can we record this interview?
- Tell us a bit about yourself and your relation with the company (how long at the company, which positions, etc)

Change itself

- Tell us a bit about the changes (changes as they defined them)
 - How would you briefly explain the changes? (Big change or broken down to smaller parts to perform by teams)
 - When did the changes happen?
 - Do you think it was communicated clearly enough?
Treat each change separately from this point?
 - Did you understand/ agree upon the need for a change?
 - Did you understand/ agree upon the urgency for a change? For example that it can't happen next year but needs to be done now?
 - Did you feel that you were ready (for example right competences/ tools) to act in the new way according to the change?
 - Did you already have enough information and knowledge?
 - Did you get enough information and knowledge during the change?
 - Did you understand what your role was after the change? Did you know who to ask if you were unsure? Was there anything documented that could help? (Is the change established?)
 - What happened to you during the change, how did it affect you?
 - Did you use a different process for your own work?
 - Did you have a different team to work with?
 - Were you changed to a different table or location in the office?
 - Did you experience a different attitude towards the work tasks?
 - Did you feel that the workload changed? Increased/ decreased?
 - Did the change break existing personal relationships? Or create new ones?
 - Did the change create uncomfot between employees?
 - How much do you feel that you have been involved/ involved others in the change? How do you feel about that?
 - Who did you feel lead the change?
 - What is your general opinion about it/them? Were you against of for it? What was the general feeling and your own feeling?
 - Was it something that you took home with you? That affected your life outside of the company?
- Do you think the product structure affects the organization structure/ change?

Leadership in change

- Did you feel that the company learnt from the changes?
- Do you have any processes for managing these learnings? (Knowledge management)
- How do you feel about trust? Do you trust top management's decisions?
- Do you have good relationships with top management? Or management in general?

Culture and people

- What do you think about the culture of the company?
- Do you feel that there is any difference between consultants and employees at the company?
- Is the communication good/ bad? How is the communication?
- How much activities for each team and for the whole organisation are organised and how much do those help improving the interpersonal relations between teams?
- With those relation outside of work, do you think those help smoothing the cross-functional tasks? In other words, the fact that you relate with someone during fika or an activity, does this help you to connect with those people when you are back to work and you need help from them?
- Do you feel motivated? Have you feel you have been motivated from the management team? How (an example)?
 - Have you feel specific motivation related to any specific change?

Change in organization (if there is enough time)

- What is your view of the company for the future? What is the company going to be in 10 years?
- Do you feel that you are in a stable environment and then a change happens? Or is the environment a constant change in motion?
 - Do you feel that the company is evolutionizing? (as it is changing its core)

E. Interview template for managers

Introduction (<5min)

- Clarify it is anonymous. (as much as possible, but there is only few top managers, let us know how much you need to be anonymous)
- Can we record this interview?
- Tell us a bit about yourself and your relation with the company (how long at the company, which positions, etc)
 - When did he become the general manager?

Change itself

- Tell us a bit about the changes (changes as they defined them)
 - How would you briefly explain the changes? (Big change or broken down to smaller parts to perform by teams)
 - When did the changes happen?
 - What was the purpose of the change?
 - How did you communicate the changes?
 - Do you think it was communicated clearly enough?
Treat each change separately from this point?
 - Did you feel that the team was ready (for example right competences/ tools) to act in the new way according to the change?
 - Did people have access to information and knowledge during change?
 - Was there any documentation for solving doubts, or any specific person that could help giving instructions or guiding the teams?
 - What happened to people and teams during the change?
 - To what extent are the complaints of the employees justified?
 - Did the change break existing personal relationships? Or create new ones?
 - Did the change create uncomfot between employees?
 - How was the process to decide on performing the change? How much were you involved in the change/decision?
 - How much did you involve others?
 - Who lead the change?
 - What was your personal opinion about the change?
 - What is your opinion: could the change have been successful had it just been implemented in another way? (how?)

Leadership in change

- Did you feel that the company learnt from the changes?
- Do you have any processes for managing these learnings? (Knowledge management)
- Do you feel that the trust towards top management was impacted or not? (Before and after)
- How is the the relationship between management and employees? Has it been affected by those changes?

Culture and people

- What do you think about the culture of the company in general terms?
 - Is there any strategy in place to guide the culture?
- Do you feel that there is any difference between consultants and employees at the company?

- Is the communication good/ bad? How is the communication?
- How do you work with motivation?
 - Have you tried to motivate specifically related to a change?
 - What motivation level do you believe there is?

Change in organization

- What is your view of the company for the future? What is the company going to be in 5 or 10 years?
 - How much future strategy is decided?
 - How do you communicate the future vision and mission to employees?
 - do you think they know and understand the vision and mission?
- Do you feel that you are in a stable environment and then a change happens? Or is the environment a constant change in motion?
 - Do you feel that the company is evolutionizing? (as it is changing its core)

F. 20 minute interviews

- Could you maybe explain how the product is built? Technical depth?
- People in general claim that the product structure is hindering change. Why do you think this is the case? Do you agree or not?
 - Do you think the old code in the product is a problem in any way?
- If yes, how do you think the product structure is affecting the organizational structure? Processes between departments, functions, teams (product is split in different component teams, tools, vehicle, etc).
- Do you feel that you have pride in the code that you create?
 - Do you think that makes you more resistant to change your code? Or let other employees work with your code?

G. Excel Sheet

Here the excel used is presented. The content of it is not included since it could potentially lead to the identification of the people interviewed.

Position at the company	Interviewee 1	Interviewee 14
- Engineering			
- Shared services			
- Management			
- Product Management			
Years in the company			
- <5			
- 5 to 10			
- >10			
Change 1 positioning			
- For			
- Against			
-in between			
Understanding of change 1			
- yes-			
-no-			
Urgency			
No understanding			
No urgency			
Change 1 team			
- OEM			
- Smart Factory			
- Smart Warehouse			
Involved in change			
-cross-functional change			
-yes			

-no-			
- partially			
- back from cross-functional			
-yes			
- no			
- partially			
- kaizen event			
- yes			
- no			
-PD team			
- yes			
- no			
- partially			
Changes perception			
1st change			
2nd change			
3rd change			
4rth			
Understands threat from competitors			
-Yes			
-No			
Knowledge about mission and vision			
- yes			
- no			
- partially			
more strict bosses			
-yes			
-no			
trust/relationship with top management			
good			

bad			
management understanding of the product			
yes			
no			