Aligning product development with strategy
- A Case study at Saab Combat Systems Division

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Master of Science Thesis
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Implementering av strategi i produktutvecklingen
- En fallstudie på Saab Combat Systems divisionen

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Abstract

**Purpose:** The purpose of this study is to increase the knowledge of how the existing gap between strategy formulation and strategy implementation can be bridged in a project-based organization. The reason for this is to contribute with an empirical example of what challenges and obstacles are associated with this gap and how these can be solved.

**Method:** The investigation of the strategy implementation in a project-based organization has been conducted as a case study. To collect the necessary empirical material, three rounds of interviews were held with relevant employees of the case company, such as the Head of Strategy, Head of Product and sales people. The interviews have been complemented by collection of documents and participation in meetings held at the case company.

**Findings:** The findings of the case study have showed that the strategy can be implemented in three ways in a project-based organization: through the organizational structure, through the executed external projects and through the portfolio management. Additionally, the findings have revealed a number of existing problems within strategy implementation. The major challenges found were achieving balance in the Balanced Scorecard, prioritization of both internal and external projects and managing a programme as a project, which were confirmed in the literature.

**Practical implications:** This study has resulted in a description of how a project-based organization implements its strategy. Furthermore, this study highlights the existing challenges within this process, such as achieving balance in the Balanced Scorecard and better prioritizing the internal and external projects.

**Theoretical implications:** This study contributes with increased insight and knowledge of how a project-based organization implements strategy and thus, expands the knowledge of how the gap between strategy formulation and implementation can be decreased. Several problems highlighted in the literature associated with this gap have been verified by this study. In this way, additional theoretical implications are the proposed solutions for how these problems can be solved.

**Key words:** Strategy implementation, Balanced Scorecard, project, prioritization, Portfolio management, Programme management.
Sammanfattning

Syfte: Syftet med denna studie är att öka kunskapen om hur det existerande gapet mellan strategiformulering och strategiimplementering kan överbryggas i en projektbaserad organisation. Anledningen till detta är att bidra med ett empiriskt exempel kring vilka utmaningarnas och hinder som associeras med detta gap samt hur dessa kan överkommas.

Metod: Undersökningen av strategiimplementeringen i en projektbaserad organisation har genomförts i form av en fallstudie. För att samla in det nödvändiga empiriska materialet har tre intervjunord genomförts tillsammans med relevanta anställda på fallstudieföretaget. Exempel på dessa är Strategichefen, Produktchefen och säljare. Intervjuerna var kompletterade genom insamling av dokument och genom deltagande på möten som hölls på fallstudieföretaget.

Resultat: Resultat av denna fallstudie visar att strategi kam implementeras på tre sätt i en projektbaserad organisation: genom organisationsstrukturen, genom exekveringen av externa projekt och genom portföljantering. Resultaten har också visat ett antal existerande problem inom strategiimplementeringen. De stora utmaningarna är att uppnå balansen i de balanserade styrkorten, prioriteringen av både interna och externa projekt och hantera ett program som ett projekt. Dessa utmaningar var bekräftade i litteraturen.

Praktiskt bidrag: Denna studie har resulterat i en beskrivning av hur en projektbaserad organisation implementerar sin strategi. Dessutom har denna studie lyft fram de existerande utmaningarna inom denna process, såsom att uppnå balansen i de balanserade styrkorten och bättre prioritering av interna och externa projekt.


Nyckelord: Strategiimplementering, Balanserat Styrkort, projekt, prioritering, portföljantering, programhantering.
Acknowledgement

This master thesis has been conducted during Spring 2016 at Saab AB as the final step in our education within the Industrial Engineering and Management programme at the Royal Institute of Technology (KTH). In this work, we have showed the skills and knowledge gained throughout our education and we have received valuable support and help from various people during this journey.

Firstly, we would like to show our deepest gratitude to Anna Jerbrant, our supervisor at KTH. Your feedback and help have been a great support and we have gained deep knowledge within the area of this thesis.

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Finally, we would like to thank all the employees at Saab who have been involved in this thesis. Thank you for always being available and sharing your knowledge and experiences with us. We would also like to thank our seminar leader and our seminar group for continuous feedback during the semester.

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Table of contents

1. Introduction ................................................................................................................................. 1
  1.1 Background ............................................................................................................................. 1
  1.2 Investigated organization ......................................................................................................... 2
  1.3 Problematization ....................................................................................................................... 2
  1.4 Purpose and Research questions ............................................................................................. 3
  1.5 Delimitations ............................................................................................................................ 3
  1.6 Thesis outline .......................................................................................................................... 3

2. Methodology ................................................................................................................................ 4
  2.1 Case study .................................................................................................................................. 4
  2.2 Research process ....................................................................................................................... 4
  2.3 Empirical data collection .......................................................................................................... 6
  2.4 Literature ................................................................................................................................... 11
  2.5 Data Analysis ............................................................................................................................ 12
  2.6 Ethical aspect ............................................................................................................................ 14
  2.7 Quality of study ......................................................................................................................... 15

3. Theoretical Framework .................................................................................................................... 17
  3.1 Definition of strategy ................................................................................................................. 17
  3.2 Balance Scorecard ..................................................................................................................... 22
  3.3 Portfolio management ............................................................................................................... 26
  3.4 Programme management ......................................................................................................... 35

4. Empirical Background ..................................................................................................................... 38
  4.1 Organization .............................................................................................................................. 38
  4.2 Products within the CS division ............................................................................................... 40
  4.3 Mission, vision and values of Saab ........................................................................................... 40
  4.4 The naval market ....................................................................................................................... 41

5. Empirical findings and analysis ........................................................................................................ 42
  5.1 Strategy implementation through the organizational structure ............................................... 42
  5.2 Strategy implementation through the customer projects ......................................................... 44
  5.3 Strategy implementation through portfolio management ...................................................... 48
  5.4 Commitment ............................................................................................................................. 54

6. Discussion .................................................................................................................................... 56
List of tables
Table 1: An overview of the interviewees in the first round of interviews .............................................. 8
Table 2: An overview of the interviewees in the second round of interviews ............................................ 10
Table 3: An overview of the interviewees in the third round of interviews ................................................. 11

List of figures
Figure 1: The organizational structure of the BU C2S................................................................................. 2
Figure 2: The research process......................................................................................................................... 5
Figure 3: Five-level taxonomy (Soderberg et. al., 2011, p. 693)................................................................... 25
Figure 4: Meskendahl's (2010, p. 811) conceptual framework ................................................................. 27
Figure 5: Factor map with the four clusters (Cooper et. al., 1999).............................................................. 31
Figure 6: The PMO triangle (Müller et. al., 2013, p. 70)......................................................................... 33
Figure 7: Programme management life cycle (Thiry, 2004, p. 267)........................................................... 36
Figure 8: Organizational structure of Saab ...................................................................................................... 38
Figure 9: Organizational structure of BA S and BU C2S.............................................................................. 39
Figure 10: Saab's business strategy ............................................................................................................. 41
Figure 11: The three tracks of strategy implementation ............................................................................. 42
Figure 12: The PMO ring model ................................................................................................................... 47
Figure 13: The product development process for the 9LV system.............................................................. 48
Figure 14: The Asset Repository and its relationships ................................................................................. 51
Abbreviations

9LVPP  9LV Product Project
BA  Business Area
BA S  Business Area Surveillance
BD & Sales  Business Development & Sales division
BI  Business Intelligence
BSC  Balance Scorecard
BU  Business Unit
BU C2S  Business Unit Combat Systems and C4I Solutions
CS division  Combat Systems division
EB  Execute Business
MA  Market Areas
PMO  Project Management Office
WB  Winning Business
1. Introduction

In this section, background information regarding this master thesis will be presented to the reader. In addition, problematization, purpose, the research questions and expected contributions will be discussed. In the study, the strategic alignment and the strategy implementation are terms that are used interchangeably.

1.1 Background

The concept of strategy has evolved over time. Initially, it could be traced back to the ancient military, where strategy referred to the best approach of winning a war (Imratanakul and Milosevic, 2007). As the concept evolved, so did its definitions. In modern times, strategy can be defined as how an organization can create value for its shareholders, customers and citizens (Kaplan and Norton, 2004), and how an organization spend their scarce resources, i.e. the future plan for the organization (Cooper et. al., 1999). As the concept of strategy grew more popular, more research has been conducted within this field.

It has been recognized that projects are ‘powerful strategic weapons, initiated to create economic value and competitive advantage’ Shenhar et. al (2001, p. 699). The link between projects and implementation of strategy is supported by several researches such as Srivannaboon and Milosevic (2006), who argue that project management is a way to achieve business goals and strategies and execute the strategy of the organization. For this reason it is important to study strategy implementation within project-based organizations. However, Arto and Dietrich (2004) highlight that nowadays, it is not enough with only effective management of single projects. For this reason, they highlight the importance of multi-project management, that is, managing several projects simultaneously, which can be done through portfolio or programme management. If a firm wants to achieve successful implementation of their strategy, they need to have a close link between their strategy and portfolio management (Kaiser et. al., 2015), which also is the case with programme management (Thiry, 2010; 2004a; 2004b; 2002).

The strategy management process is discussed by numerous authors, and includes concepts and processes associated with strategy analysis, formulation, evaluation and implementation (Morris and Jamieson, 2004). Numerous authors have addressed the strategy formulation, which is also what managers are mainly trained for (Hrebiniak, 2006). However, even though strategy formulation is difficult, strategy implementation is even more challenging (Meskendahl, 2010; Hrebiniak, 2006; Morris and Jamieson, 2004; Grundy, 1998). It is reported by Johnson (2004) that 66 % of corporate strategy is never implemented, which suggest a failure when implementing strategy, therefore it is not surprising that Grundy (1998, p. 43) referred to strategy implementation as ‘the graveyard of strategy’. The strategy implementation faces many challenges that need to be managed (Hrebiniak, 2006), it is, however, of major importance since without effective strategy implementation the business strategy cannot succeed (Morris and Jamieson, 2004). Therefore the need for improved strategy implementation is eminent.

Furthermore, despite that literature discusses strategy management as an important tool of business success (Meskendahl, 2010; Hrebinial, 2006; Cooper et. al., 2001; 1999), the research is mainly focused on strategy formulation, rather than implementation and why it fails (Meskendahl, 2010; Hrebiniak, 2006; Morris and Jamieson, 2004; Johnson, 2004; Beer and Eisenstat, 2000; Grundy, 1998; Giles, 1991). Therefore it is of interest to study the gap between the strategy formulation and implementation, what challenges that arises during the implementation and how to manage them, within a project-based organization. The phenomena will be investigated in the form of a case study within a large project-based organization, with focus on the alignment of the product development with strategy.
1.2 Investigated organization
Saab Group, here fourth Saab, is a global organization providing world-leading products, services and solutions for military defence and civil security purposes. Currently, Saab has over 14,000 employees in more than 100 countries, spread across several continents and markets. Saab is divided into several Business Areas (BA), which in turn are divided into Business Units (BU) and further into divisions and departments. This master thesis is conducted within the BA of Surveillance (S) and further within the BU of Combat Systems and C4I Solutions (C2S). The thesis will hereafter focus on one of these divisions, the Combat System Division (CS), which is located in Järfälla, Stockholm. The organizational structure for the BU C2S is displayed in figure 1.

![Organization Structure of BU C2S]

The CS division is structured into four departments;
- Project Management Office (PMO)
- Product
- Competence
- Customer Support

BA S's product portfolio offers solutions for land and marine systems, such as radars and cannons. The CS division is focused on both software and hardware products specifically for marine security and defence, where the most important product is the 9LV system.

A re-organization to a cross-functional organization has recently been made within the C2S division, which has resulted in new roles and new work routines for the employees. The main reasons for the re-organization that took place in the beginning of 2015 are high overhead costs and decrease in personnel. In addition, a new product development process for the 9LV Product Project (9LVPP) has been developed and implemented. The new product development process aims to develop a more standardized product, which thereafter will be adapted for the specific customer needs within the customer projects. This might results in that future costs can be saved, especially R&D costs within the customer projects. Saab's business operates through projects, and can thereby be classified as a project-based organization.

1.3 Problematization
BU C2S and the CS division face challenges regarding their strategy implementation, more specifically aligning the product development of the 9LV product with the strategy. 9LVPP is a new concept, which has yet not been completely integrated in the organization, hence strategy implementation has not been in focus. However, the establishment of the strategic alignment is of greatest importance in order to achieve business success. Currently, BU C2S and the CS division experience a constrained financial situation, which has resulted in a financial and short-term focus during selection and prioritization of activities in their portfolio.
The challenges the BU C2S and the CS division face are similar to the challenges discussed in literature regarding the gap between the formulation and implementation of strategy.

1.4 Purpose and Research questions
The purpose of this case study is to contribute with further knowledge of strategy implementation within a project-based organization. By doing so, the case study aims to increase the knowledge of how the gap between strategy formulation and implementation is expressed in the product development in a project-based organization, by providing a practical example. In order to do this, the following research questions will be investigated:

- How is strategy implemented in product development within a project-based organization?
- How can challenges associated with strategy implementation be overcome in order to reach effective strategy implementation within product development?

1.5 Delimitations
The study is based on the context of the case company, which implies that the findings are applicable to the studied organization and similar project based organizations operating within the same type of market. The investigation is delimited to the BU C2S, and more specifically, the CS division. Further delimitations done in the study are to only include the 9LV product, since this product generated the highest revenue in relation to the remaining products in the portfolio. Furthermore, the development process of the 9LV product was newly implemented, and is desired to expand to a standard practice in the future.

1.6 Thesis outline
Having described the background to this thesis, the methodology of the study will be presented. Thereafter, the theoretical framework will be introduced, in which the various theories, processes and models used for strategy implementation within project based organizations are described in detail. The theoretical framework is followed by an empirical background of the case study, in which the organizational structure is described together with the overall mission, vision and values of the studied organization and the market in which it operates. This is followed by the empirical findings, which are presented as three tracks through which strategy is implemented. A discussion regarding these findings will be held, followed by a by a conclusion where the answer to the research questions will be presented together with the main findings and the empirical contribution. The thesis report will be brought to an end with final reflections of the study, in which theoretical contribution is discussed and future research is proposed.
2. Methodology

This chapter will in detail describe and evaluate the chosen methods of the study. In addition, this chapter will include a discussion regarding the validity, reliability and generalizability, e.g. the quality of the study.

2.1 Case study

Yin (2014) states that a case study is an appropriate method, compared to others, when three conditions are fulfilled; (1) the research questions are on the form “how” or “why”, (2) when behavioral events are out of control for the researcher, and (3) when a contemporary phenomenon is being studied. The research questions in this study are what Collis and Hussey (2014) describe as of a descriptive and explanatory nature, which is in line with the first of Yin’s (2014) conditions. For us to explain the studied phenomenon, in-depth knowledge of the various processes used were deemed more valuable than maintaining the breadth, which is an additional factor consistent with a case study (Denscombe, 2003; Yin, 2014). By focusing on one case, a case study would allow us to develop a holistic view, thus enabling a deeper understanding of a complex phenomenon (Yin, 2014).

The study was set in a context over which the researchers had no influence, hence the phenomenon was in its real-world, natural and complex setting (Collis and Hussey, 2014; Denscombe, 2003; Yin, 2014) and fulfills the second condition. The study was of a contemporary phenomenon, thus addressing the third of Yin’s (2014) conditions, which combined with the above mentioned reasons indicate that a case study was a suitable method for this study.

There are, however, some challenges connected to case studies that have to be considered, especially regarding the statistical generalizability. The statistical generalization of findings from a case study can be low since they apply to the specific context of the studied phenomenon (Denscombe, 2003; Yin, 2014), thus resulting in that the extent to which the findings are applicable to other cases depends on the similarity between the case studied and other cases. It is, however, possible to achieve a high analytic generalizability in a case study, where the case is not viewed as a sample, but as an opportunity to shed light on theoretical concepts through the gathered empirical material (Yin, 2014). The strength of a case study is that various evidence can be used within the same study, which encourages triangulation, thus contributing to the quality and validity of the study (Denscombe, 2003; Yin, 2014).

2.2 Research process

For this case study, an abductive approach was chosen, due to the fact that an abductive approach allows us to alternate between the empirics and theory, thus enabling a deeper understanding of our phenomena (Alvesson and Sköldberg, 2008). The abductive approach is of importance for this case study in order for us to keep an open mind regarding the empirical reality being studied. The main reason for this was to keep an open mind during the early phases in the case study and not being biased by any theoretical knowledge when identifying existing problems at the case company. However, by continuously alternating between the theory and additionally gathered empirical data, we avoided pitfalls that is common for inductive studies, namely the risk of “naive empirics” or common-sense assumptions (Alvesson and Sköldberg, 2008). Having considered this, the abductive approach was deemed a suitable approach to provide high quality results supported by theoretical material.
The research process of the thesis was divided into five parts, illustrated in figure 2. Continuously throughout the thesis, the research questions were discussed and adjusted in conjunction with our deepening knowledge of the strategy area and the organization. Discussions were held at regular intervals during the entire research process with our supervisors, both at the Royal Institute of Technology and at Saab, to avoid misconceptions.

Figure 2: The research process

The main data collection method in this study was qualitative interviews, which were divided into three rounds depending on the purpose of the interview. Each step and method in the research process will be briefly described below, and further discussed in more detail later in this chapter.

2.2.1 Pre-study
The aim of the Pre-study was to develop a basic understanding of the organization and the context in which this study was to be conducted. This understanding was developed through eight interviews with the Management Team of the CS division, gathering of documents and observations of various meetings. In addition, two master theses conducted at the case company during spring 2015 were read, which treated the innovation culture (Eriksson and Svensson, 2015) and the implementation of lean in the organization (Furin and Martinsson, 2015). These theses were a recommendation from our supervisor at Saab since he deemed they still represented the organization and would give us an overall understanding of the organization.

2.2.2 Problematization
During the Problematization phase of this study, thirteen more in-depth interviews regarding the strategy processes were conducted. The purpose of the interviews in this phase was to understand the main strategy implementation processes and identify possible issues within these processes at Saab. Thus, the interviewees were chosen from various levels within the company. Some data reduction and early analysis were done through summarizing each interview and categorizing the data. Additionally, initial data displays were done through network diagrams and matrices. The second part of the research process condensed to more clearly defined focus areas, which then were used as a base in the next phase of the research process.

2.2.3 Specialization
Through the second phase of the research process, the key issues that were to be studied further in the Specialization phase were identified. These areas formed the base of the extensive literature study done in this phase of the research process. The knowledge gained from the literature study and earlier interview rounds contributed to the third round of interviews. The aim of these interviews was to gain in-depth knowledge of identified key strategy processes and related
challenges within Saab, which was combined with documentary analysis and developing the data reduction and data displays further. The third phase of the research process was concluded with a compilation of the situation at Saab, which was to be used in the next phase of the study.

2.2.4 Final Analysis
During the Final Analysis, the collected data was mapped with the knowledge gained from the literature study. Conclusions were drawn from the completed data reduction and data display, and recommendations were developed and delivered to the Management Team of the CS division.

2.2.5 Delivery
During the Delivery phase, the thesis was presented both at the Royal Institute of Technology and at Saab’s office in Järfälla. Additionally, one day was dedicated for the handover of the project and the final results to the management team of the CS division.

2.3 Empirical data collection
The empirical data collection was mainly done through observations and interviews. These will be described in this section.

2.3.1 Observations
The observation methodology was used for two different purposes in this study. Primarily, observations were used as an initial step to develop a basic understanding of the company, its culture, processes and the various roles within the CS division. Due to the nature of these purposes, it was chosen to be suitable to conduct participant observations rather than systematic observations, as the role of participant observations allows a holistic understanding and is focused on qualitative material rather than quantitative. Moreover, out of all social research methods, the participant observation role interferes least with the natural aspect of the situation being studied (Denscombe, 2003).

According to Denscombe (2003), it is important to not have a negative impact on the setting during the observations, thus keeping the context studied as natural as possible. For this reason, we deemed the open role approach as more suitable than the disguised role. In addition, the safety aspect of Saab’s business needed to be taken into consideration during the observations. Denscombe (2003) argues that an anonymous observer role would result in a higher validity of the gathered data, since it does not interfere with the studied context. However, adopting the anonymous observer role was not possible since it contradict with the confidential regulations of Saab. Furthermore, Denscombe (2003) states that a situation has an effect of which roles an observer should adopt. Therefore, all employees were informed by our supervisor at Saab about whom we were and that we were to conduct our master thesis at the company. In this way, employees were aware of our existence and our purposes while attending meetings and thus, it was ensured that they felt secure and could choose what kind of sensitive information they wanted to share with us. Collis and Hussey (2014) discuss that people might change their behavior due to the fact that they are aware of being observed. They can adapt ‘demand characteristics’ such as becoming more productive and this would have a negative impact on the material gathered from the observations. However, since we performed our observations with an open mind and no pre-decided purposes, more than the development of our understanding of the organization, this aspect was deemed not important. Furthermore, this approach ensured that we did not identify or build relations to specific issues or employees during the observations, which is a challenge stressed by Denscombe (2003).
Observations took place as fieldwork in the form of formal meetings at the CS division, hence it was ensured that first hand data from real life situations was gathered (Denscombe, 2003). The focus during the observations was on observing the context, e.g. what people say and how they behave individually and in group, rather than focusing on being directly and fully involved with the employees and situations being studied, which is the most common assumed role for business research (Collis and Hussey, 2014). Field notes were taken during the observations, specifically notes for future references, such as names of possible stakeholders for our study.

According to Densombe (2003), the 'issue of perceptions' needs to be considered and tackled when conducting participant observations. Also, since observations are time and energy demanding, there is a risk of distraction and therefore, missing important aspects (Collis and Hussey, 2014). To minimize the impact of these problems, it was ensured that we discussed our impressions and observations of meetings directly after each observation were conducted. For this reason, field notes were taken during observations in the form of hand written notes simultaneously as the meetings proceeded (Denscombe, 2003).

Furthermore, Saab provided us with a workroom in the office where we spent the majority of the time while conducting the thesis. This contributed to our understanding of the company in its natural context and gave us possibilities to engage in informal discussions with the employees, for instance during lunch.

The second application of the observation methodology was as complement for the three interview rounds conducted throughout the thesis. The purpose of these observations was to observe the body language of the interviewee and other non-verbal activities in order to detect diverging behaviors. In case any diverging behavior existed, it was managed in order to ensure a high quality of the interview. For instance, it was noticed during one interview that the interviewee was short-spoken and therefore, more emphasis was taken on follow-up questions and reformulation of questions when necessary during the interview.

2.3.2 Interviews

The main method for collecting data during the study was through qualitative interviews, thus relying on information from fewer informants (Denscombe, 2003). However, since the work regarding the implementation of the strategy often is done on an individual level, this was not deemed an obstacle for the study. For the same reason, combined with the considered high risk of the data being of a sensitive or privileged nature, depth instead of breadth were deemed preferable regarding the data for this particular study (Denscombe, 2003).

The interviews were divided into three rounds since the purpose of the interviews between the rounds was different. The interviews during the first round aimed at achieving an understanding of the organization within the division, the second aim at a deeper understanding within the strategy processes and the third aimed at gaining in-depth knowledge within specific areas. Furthermore, each round were preceded with reading some literature, thus ensuring the abductive approach of the thesis. During all interviews the interviewee were informed of the purpose of the specific interview and how the data provided by them would be used for. Moreover, the interviewees participated of their own free will and they were given the opportunity to be anonymous in the study (Denscombe, 2003 and Collis and Hussey, 2014). Additionally, all interviewees were encouraged to raise any question they thought had not been covered by the interview as a finishing question, as well as if they could recommend other persons important in the strategy process, which is consistent with the recommendations made by Denscombe (2003). Some data deemed
specifically important were checked against collected documents or with another interviewee (Denscombe, 2003).

Since the interviews aimed at developing an understanding of both the role of the interviewee, the organization and the strategy process, a semi-structured approach was chosen (Collis and Hussey, 2014). Semi-structured interviews provide some flexibility in the interviews and thereby allowing the interviewees to develop their own ideas regarding the topics raised during the interviews (Denscombe, 2003 and Collis and Hussey, 2014). In addition, a single interviewee per interview was preferable since it provided us with only one interviewee’s views and impressions at a time (Denscombe, 2003), while the interviewee wasn’t affected by other co-workers. The majority of the questions asked during the interview were open questions, encouraging longer and more developed answers from the interviewee. In addition, probing and follow-up questions were used to ensure that we gained maximum information from each interview (Collis and Hussey, 2014). Each interview had one hour at disposal, however, some of the interviews were finished before this time was ended. Even though these interviews were shorter in length, we acquired all data necessary for the study.

2.3.2.1 First round of interviews

In preparation for the first round of interviews, two previous master theses conducted last spring were read, in order for us to get a basic understanding of the organization. Moreover, for us to keep an open mind during these interviews no further literature search were done. The information in the previous theses regarding the Combat System division was, according to our supervisor at Saab, still accountable for the division. These theses, combined with our knowledge from our education at the Royal Institute of Technology, the knowledge obtained during our observations of various meetings and recommendations from our supervisor at Saab, formed the basis of the questions asked during this round of interviews.

The first round of interviews were conducted during the second and third week of the thesis work and aimed for us to get an understanding of the context in which we were to operate during our thesis. The Management Team of the CS division were interviewed during the first round, which was a recommendation from our supervisor at Saab and were also deemed to give us an overall understanding of the CS division regarding the organizational structure, roles, work processes etc. A team leader within the 9LV Product Project was also interviewed during the first round, this in order for us to obtain a deeper knowledge of the 9LV product. Furthermore, the Head of Products was interviewed twice since not all aspects could be covered during the first interview due to the time limit. The first round of interviews consisted of eight interviews in total, and a brief overview over the interviewees are presented in table 1.

Table 1: An overview of the interviewees in the first round of interviews

<table>
<thead>
<tr>
<th>Role</th>
<th>Main responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head of Combat Systems</td>
<td>Achieving the economic goals of</td>
</tr>
<tr>
<td>Deputy Head of Combat Systems</td>
<td>Strategy related question for CS Division</td>
</tr>
<tr>
<td>Head of Product</td>
<td>Aligning products with strategy</td>
</tr>
<tr>
<td>Head of Competence</td>
<td>Provides the right competence in the right time</td>
</tr>
<tr>
<td>Head of Project Management Office</td>
<td>Project owner</td>
</tr>
<tr>
<td>Head of Customer Support</td>
<td>Responsible for Customer Support</td>
</tr>
<tr>
<td>Team Leader 9LV Product Project</td>
<td>Development of Core</td>
</tr>
</tbody>
</table>
All interviews conducted during the first round were face-to-face since all interviewees, except the Head of Customer Support who visited our office, were located in Järfalla. This approach gave us the opportunity to ask complex and possibly sensitive questions (Collis and Hussey, 2014 (p.134)) as well as interact with the interviewee. During the first round of interviews the interviewees were asked about their role at the division and their everyday tasks, as well as their view on the organization and the information stated in the previous theses. Since the two pervious theses were conducted one year ago and the fact that Saab has experienced a re-organization, the information in these theses needed to be verified. The data verified from the previous master theses regarded the organizational structure, value creation, work methods and communication. In order for the interviewee to feel comfortable with the situation and establish some amount of trust, the first questions asked covered the interviewee's role within the organization since this is familiar territory and a relatively easy question to answer. These questions also allowed us to collect background information that might not be directly contributing to our thesis, but it contributed to our understanding of the organization (Denscombe, 2003).

The first round of interviews were conducted together with two other master students that conducted their own master thesis simultaneously at the CS division at Saab. During these interviews, one master student from each master thesis group took written notes, while the other two lead the interview. The interviews were organized this way in order for both master thesis groups to obtain primary data from the interviews. However, by involving two master thesis groups in the same interview, two different purposes had to be considered. To satisfy each purpose, less specific interview questions could be asked by each master thesis group, resulting in collected data of a general character.

The interviews were audio tape-recorded, with the interviewees consent. The recording of the interviews provided us the possibility of re-listening and thereby helped minimize the risk of misinterpretation of the data. The recordings were used to extract and compare information collected during the interview and thereby contributed to more robust and comprehensive interview summaries done directly after each interview (Collis and Hussey, 2014). The interviews were not purely transcribed, however, the summaries were extensive and very close to a transcription. The field notes taken during the interviews acted as a complement to the audio tape-recording, since the recording alone might miss relevant information that the field notes can fill in, such as tone of voice and body language (Denscombe, 2003). During the interviews, the interviewees were given the possibility to control which information we could use for the study when discussing company confidential issues. This was deemed to create a comfortable environment were the interviewee could speak freely. None of the interviewees have been visibly or noticeably disturbed or held back by the audio tape-recording, even though some disturbances from the recording cannot be dismissed completely (Denscombe, 2003).

2.3.2.2 Second round of interviews

In order for us to keep an open mind regarding the possible issues that were to be discussed during the interviews, no literature were read prior to this round of interviews. If we were to have read a large amount of literature at this point in our process, it would have had a great influence on our interview questions and thereby challenges not identified in the literature might have been overseen.

The collected documents from our observations and the knowledge obtained during the first round of interviews were used when developing the interview questions for the second round of interviews. The purpose of the second round of interviews was to gain a deeper understanding of
the strategy implementation within the BU C2S, which is why the interview questions revolved around these processes. The questions asked during the second round of interviews provided us with more in-depth knowledge of how different roles within the organization worked with and strategy and related areas. Furthermore, challenges related to the strategy implementation were discussed during the interviews and the interviewee were encouraged to elaborate in relation to these challenges in order for us to gain a deeper knowledge within these areas. In addition, questions regarding the role of the interviewee in the organization were asked at the beginning of the interview to those interviewees that were not recurrent from the first round of interviews. As previously discussed, this was done for the interviewee to feel comfortable and for us to gain important background information (Denscombe, 2003). Some of the interviewees from the first round of interviews were also interviewed during the second round since these interviewees worked with strategy related processes. In total, thirteen interviews were performed and a brief overview of the interviewees can be seen in table 2.

Table 2: An overview of the interviewees in the second round of interviews

<table>
<thead>
<tr>
<th>Role</th>
<th>Strategy relation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head of Combat Systems and C4I Solutions</td>
<td>Ensures C2S division aligns with set goals</td>
</tr>
<tr>
<td>Head of Strategy</td>
<td>Ensures C2S fulfills Saabs overall strategy</td>
</tr>
<tr>
<td>Head of Product</td>
<td>Aligning products with strategy</td>
</tr>
<tr>
<td>Head of PMO</td>
<td>Customer project owner</td>
</tr>
<tr>
<td>Head of Combat Systems</td>
<td>Ensures CS division aligns with set goals</td>
</tr>
<tr>
<td>Deputy Head of Combat Systems</td>
<td>Long- and short term strategy for CS division</td>
</tr>
<tr>
<td>Product Leader 9LVPP</td>
<td>Implementing strategy in 9LVPP</td>
</tr>
<tr>
<td>Team Leader of Sales group</td>
<td>Naval sales for the CS division</td>
</tr>
<tr>
<td>Sales person 1</td>
<td>Responsible for Business Intelligence database</td>
</tr>
<tr>
<td>Sales person 2</td>
<td>Product Sales, support Customer Sales MA</td>
</tr>
<tr>
<td>Project Leader</td>
<td>Ensuring delivery of project results</td>
</tr>
<tr>
<td>Member of Group Strategy</td>
<td>Strategy function at corporate level</td>
</tr>
<tr>
<td>VP Business Development and Partnership EDS</td>
<td>Responsible for marine domain in Sweden</td>
</tr>
</tbody>
</table>

The interviewees were all chosen for their deemed importance in the strategy implementation process and for their position within the organization (Denscombe, 2003). Furthermore, the interviewees provided us with recommendations of which persons to interview in order for us to gain a deeper knowledge of this process. These recommendations were taken into consideration when mapping and selecting persons to interview during the second round of interviews.

All interviews, except one, were conducted face-to-face since the interviewees were located at the office in Järfälla. As previously argued, face-to-face interviews enables more interaction with the interviewee and the possibility to ask complex and sensitive questions (Collis and Hussey, 2014). One of the interviews was not conducted face-to-face but through an online meeting, since Sales person 1 was not located in Sweden. Online meetings introduce some limitations such as not being able to read body language and facial expressions. The interviewee might also feel a lack of trust and comfort due to the fact that the person has not met the interviewers in person. This issue was prevented by focusing on creating a comfortable environment for the interviewee at the beginning of the interview by introducing ourselves, our thesis work and the purpose of the interview.

During the interviews conducted in the second round of interviews, only the interviewee and the interviewers were present. One of the master students led the interview, while the other took notes, ensuring a more comprehensive data collection. In addition, the interviews were audio tape-
recorded for the same reasons as in the first round of interviews. All interviewees were asked for their consent regarding the audio tape-recording, which is stressed by both Collis and Hussey (2014) and Denscombe (2003). As for the interviews performed during the first round of interviews, an extensive summary, almost a transcription, was made from both the field notes and the recording directly after each interview, which ensured a decreased risk of misunderstanding of the data. The possible restraint from the interviewee regarding the information given due to the recording were deemed to be at an acceptable level. This because when discussing particularly sensitive issues, the interviewee were encouraged to speak freely and given the possibility to control which information we could use for other purposes than our own understanding.

2.3.2.3 Third round of interviews

The third rounds of interviews were preceded by an extensive literature search, discussed in detail in the next section. The extensive literature study provided us with a deepened knowledge regarding the challenges and methods identified in previous studies. The literature study, combined with the documents collected during our observations and obtained knowledge during previous interviews, formed the basis of the interview questions asked during the third round of interviews. This allowed us to gain considerable knowledge about the strategy implementation and related topics deemed necessary (Collis and Hussey, 2014). The purpose of the third round of interviews was to gain an even more in-depth knowledge within identified challenges regarding the strategy implementation. The interviewees in this round of interviews were deliberately chosen for their deep knowledge or unique insight within the strategy implementation at the CS division at Saab (Denscombe, 2003). A total of four interviews were conducted during the third round of interviews, and a brief overview of the interviewees is presented in table 3.

Table 3: An overview of the interviewees in the third round of interviews

<table>
<thead>
<tr>
<th>Role</th>
<th>Strategy relation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head of Combat Systems</td>
<td>Ensures CS division aligns with set goals</td>
</tr>
<tr>
<td>Head of Strategy</td>
<td>Ensures C2S fulfills Saabs overall strategy</td>
</tr>
<tr>
<td>Head of Product</td>
<td>Aligning products with strategy</td>
</tr>
<tr>
<td>Member of the Group Strategy</td>
<td>Customer project owner</td>
</tr>
</tbody>
</table>

The interviews during the third round of interviews were arranged as the previous interviews during the first and the second round. Only the interviewee and the two interviewers were present during the interviews, where one of the master students led the interview and the other took notes. This to ensure a data collection as comprehensive as possible. In addition, the interviews were audio tape-recorded with the consent of the interviewee. As in the previous rounds of interviews, each interview were extensively summarize by the two master students from both the field notes and the recording directly afterwards.

2.4 Literature

As mentioned previously, the research design was made in such a way so that the extensive literature study was conducted after the data analysis of the first and second rounds of interviews. The main reason for this is that the compilation of all the empirical material gathered up until the third round of interviews was used for identifying problem areas within the strategy implementation at the case company.

The aim of the literature study is to map the gathered data with the existing theory and in this way, identify areas of improvements. For this reason, it is important to find appropriate literature with high validity with the aid of using relevant keywords. The following search words were used as
central key words for the literature search: *strategy implementation*, *balanced scorecard*, *product portfolio management*, *programme management*, *leadership and strategy*, *organizational communication*.

The literature was primarily gathered from Primo, a search engine provided by the library at the Royal Institute of Technology, which contains scientific and academic information from various sources such as scientific articles and e-books. Primo gives the possibility to access International Journals relevant for our study, e.g. *International Journal of Project Management*, *Journal of Product Innovation Management*, *International Journal of Management & Organizational Studies*, *Journal of Management Development* and *Strategy & Leadership*, which increases the validity of the study. For this reason, the major part of the literature study was conducted by reading scientific articles as these were easily accessed through Primo.

It is highly important to have a critical mind-set during the literature study in order to ensure a high validity of the case study and additionally, high-quality of the data mapping after the third round of interviews. Besides using the above mentioned keywords to find relevant literature, the read literature acted as a source of inspiration for future reading. While conducting the literature study, we noticed that a number of articles referred to the same models, theories and processes and for this reason, it was deemed important to trace back to those articles where these initially were presented. This was done in order to ensure high quality of the gathered data. Moreover, in general, the read articles acted as a source of inspiration for further reading since interesting statements or ideas could easily be traced back to their original source.

2.5 Data Analysis

Due to the nature of the study and the chosen methods for data collection, a mass of qualitative data was gathered (Collis and Hussey, 2014). To manage the large amount of data collected, we used the analysis method developed by Miles and Huberman (1994), which consists of three flows of activity: (1) data reduction, (2) data display and (3) conclusion drawing and verification. These flows of activity will be further discussed below. In addition to this model, early analysis that is recommended by Miles and Huberman (1994) has been used, since the data collection generated an extensive amount of qualitative data.

2.5.1 Early analysis

Miles and Huberman (1994) argue that interweaving the data collection and analysis from the start of the study is preferable when collecting qualitative data. By engaging in early analysis we could collect necessary data needed to fill in gaps that emerged during the study, and thereby continuously check the validity with the reality during the study (Denscombe, 2003). Furthermore, the early analysis allowed us to reflect and develop the gathered data as soon as it was collected by identifying topics of interest, and thereafter use it when preparing for up-coming interviews or phase of the study. By alternating between evaluating collected data and determining what data that needed to be gathered, we reduced the risk for not considering relevant data (Miles and Huberman, 1994).

2.5.2 Data reduction

The data reduction process refers to continuously focusing and organizing the qualitative data during the study, and thereby being able to draw and verify final conclusions (Miles and Huberman, 1994). It was necessary to reduce the qualitative data that we had collected if we were to perform a high-quality analysis, due to the amount of data gathered (Collis and Hussey, 2014).
The data reduction was continuously done throughout the study and started through the selection of data collection method, interviewees and interview questions. As previously mentioned, the data gathered from the interviews were summarized directly after each interview. In this summary the data was sorted into general themes. The selection of themes during this phase of the analysis were based on the themes used during the interviews, and were expected to change when the analysis progressed later in the study. The compilation of each interview is a form of early analysis, since the data within these compilations were sorted into general themes. This form of early analysis is described by Miles and Huberman (1994) as Pattern Coding. The “playing” with the data is also in line with Yin (2014), who argues that searching for promising patterns etc. within the early data facilitates the problematization. Denscombe (2003) argues that the initial choice of categories is not crucial, as long as the researcher develop them throughout the study. The themes used in the initial coding were therefore continuously refined during the study along with our deepening knowledge of the situation at hand.

After the second round of interviews, we did a compilation of all the gathered data using analytic coding, described by Denscombe (2003). This method entails breaking down the data into units and then categorizing these units. The units used were common patterns and themes identified when rereading interview summaries and gathered documents relevant to the studied topics (Denscombe, 2003; Collis and Hussey, 2014). The selected units have been refined and improved when deemed necessary. These units were then sorted into categories related to identified processes. Color-coding was used when categorizing to ensure that the data were traceable and not removed from the context in which they were gathered (Miles and Huberman, 1994).

2.5.3 Data display

Miles and Huberman (1994) argues that the visual display of the data is a tool of high importance for the understanding of the findings, since it counteracts that the researcher jump to hasty and unfounded conclusions. In addition, the visual display is a positive contribution to the reader’s understanding. The visualization of the reduced data was continuously performed during the study and has been done in several steps. Initially, during the first round of interviews, network diagrams were drawn to understand the connection between the various parts of the organization. As the study progressed these network diagrams were continuously developed and improved, as more data was gathered from the second and third round of interviews. These diagrams were verified and approved with the case company, thus strengthening the validity of our findings (Miles and Huberman, 1994).

After the second round of interviews, the identified problems and challenges were displayed in a matrix, similar to the Case Dynamic Matrix presented by Miles and Huberman (1994). The matrix displayed the themes and patterns identified during the data reduction, as well as to which level and context within the organizational structure the data belonged to, thus ensuring the traceability of the data. By displaying the data through this matrix, connections and contradictions between different areas connected to the processes emerged and could be explored further. Furthermore, the matrix provided us with an overview of the gathered material.

The visualization of the data helped us to achieve an overview of the challenges the case company faces and to present the collected data systematically, and thereby enabling valid conclusion drawing in the next phase of the analyzing process (Miles and Huberman, 1994).
2.5.4 Conclusion drawing and verification

The conclusion drawing started in an early stage in the study, which is consistent with Miles and Huberman (1994) statement that the qualitative researcher notes patterns etc. at an early stage. However, these conclusions were held lightly, i.e. we maintained our openness since the conclusions were likely to change when the study progressed and new data were collected. As the study progressed and we could verify our conclusions with the gathering of more data, they grew stronger. An important part of this process was the visualization of the data, since the displays helped us find patterns and connections, thus leading to our drawn conclusions.

2.6 Ethical aspect

In order to avoid any harm, disrespect or misunderstandings while conducting the study, it was important to take the ethical aspect into consideration. A contract was signed at the first day of the thesis work, in which it was stated that no confidential information could be shared or distributed outside of Saab. The ethical aspect linked to each used method is discussed below.

2.6.1 Ethical aspects throughout the observations

One ethical dilemma raised by Collis and Hussey (2014) is whether one should be open with the observer role or keep it a secret. As discussed in the observation section, due to safety reasons at Saab we chose to keep the observer role open to all employees and hence, the ethical issues linked to assuming a disguised role were avoided. This is also discussed by Denscombe (2003), who raises the issue of not having permission from the objects being studies if the observer role is kept secret. The permission was implicitly given in this case by informing all employees at the BU of who we were and what our purpose with the master thesis was.

According to Denscombe (2003), assuming the role of “participant as observer” while conducting observations can lead to ethical issues due to the possibility of the observer obtaining confidential information, either by mistake or as the result of a developed relationship between the observer and the observed objects. If this material is to be used in the study, it is important for us to have a clear understanding of how to use it in order to avoid any ethical problem that can arise in this step. The aspects that should be taken into consideration is that no one should suffer as a result of using the material and it should not be possible to link it to a particular employee. This possible ethical issue was addressed in several ways. Firstly, it was decided early how the data gathered should be stored so that only the authorized thesis students could access it. Furthermore, the information gathered from the observations during meetings was not linked to a specific person.

2.6.2 Ethical aspects throughout the interview process

Denscombe (2003) stresses that a person who contributes to research findings should not be negatively affected by the participation. Therefore, the interviewee was informed by email of who we were, the purpose of the interview and our proposal before each interview. This also ensured that the interviewees did not feel forced to participate, since they were well informed even before accepting the interview (Denscombe, 2003).

Before the interview started, the interviewee was asked if he/she wanted to be anonymous in the study and if they gave approval to record the interview on an audio recording device. The interviewee was notified about the purpose of the interview and what the information will be used for. Following Denscombe’s (2003) advice, we conducted our work openly. Additionally, the interviewee was also informed about the protection of the data collected during the interviews in order to ensure confidentiality of gathered data. In a verbal agreement with our supervisor at Saab, it was decided that the raw data is to be stored locally at the computers provided by Saab to the

14
thesis students, to be used throughout the entire study. The raw data includes the audio recordings and notes from all interviews that can be directly connected to specific interviewees. As discussed by Denscombe (2003), this is a safe way to store data, since the risk of allowing access to the raw data for someone unauthorized is then kept to a minimum. However, since the processed raw data and material linked was to be included in the final thesis report, accessible to the public, and was not considered to be of a sensitive nature, it was stored on either Google Drive or Dropbox. This was a verbal agreement among the thesis students and the supervisor at Saab.

Collis and Hussey (2014) discuss additional aspects that can create ethical problems during an interview, such as usage of threatening words and sensitive questions. Therefore, effort was put into a neutral formulation of interview questions. For instance, no value-laden questions were asked to avoid affecting the interviewee, especially when discussing sensitive topics.

2.6.3 Ethical aspect throughout the report compilation process

It was also ensured that the ethical aspect was kept during the writing process of the thesis report. As the thesis report was written, it was chosen to use citations from the interviews in the 'Empirical findings and analysis' chapter if these were deemed to highlight an aspect in a certain context. For this, we used the extensive interview summaries to locate at what point of inter interview the desired citation was said. Thereafter, the relevant piece of interview in question was played in order to write down the exact citation as it was said by the interviewee so that it could later be used it in the report. Since the interviews were conducted in Swedish and the thesis report was written in English, the citations had to be translated. In order to ensure that the meaning of the citation would not be changed as a result of translation, we kept in mind that the citation should be translated without adding any of our personal interpretations and value in it.

To ensure that the ethical aspect was kept when using citation, we contacted the interviewees that were cited to ensure their approval of using their statements. This was done by sending the 'Empirical findings and analysis' chapter of the thesis report in an e-mail to the interviewees and highlight their citations to facilitate their reading. By doing so, the interviewees were given the possibility to see in what context their citations were used and whether they deemed if we translated their citations correctly. Moreover, in order to ensure that the citations were not traceable to an interviewee, it was decided to call them 'a manager', as all of the cited interviewees were managers. It was also stated in the citation at which organizational level they are active in. In case an interviewee desired to change a citation, the original citation was removed and the proposed changes were taken into consideration when rewriting the original citation into text.

2.7 Quality of study

The quality of the study is affected by its validity, reliability and generalizability, which will be thoroughly discussed in this section.

2.7.1 Validity

Yin (2014) argues that achieving a high validity can be challenging when conducting a case study, especially regarding the construct validity. Construct validity refers to actually studying what has been stated as the purpose of the study. To strengthen the construct validity, it is suggested by Yin (2014) to focus on using multiple sources, establishing chains of evidence and to have the case study report reviewed by selected informants. To achieve triangulation we have been careful not to use data from a single source, thus, throughout the study, data have been gathered from multiple sources, for instance interviews, observations and documents. In addition, we have ensured the traceability of the data throughout the study, and to verify our findings with selected key
stakeholders of the case study, thus strengthening the validity (Miles and Huberman, 1994). Furthermore, we took into account the external validity, which is connected to the analytic generalizability, discussed later in this chapter. Yin (2014) suggests that the external validity in a single-case study can be strengthened by using theory, which is why we have spent time and effort on choosing an appropriate theoretical framework for the study.

2.7.2 Reliability
The interpretation of reliability varies between the different research paradigms. It is difficult to achieve a high reliability in an interpretivist study in a positivist sense, where reliability refers to the possibility of repeating the study and receiving the same results (Collis and Hussey, 2014). Since we conducted the study under the interpretivist paradigm, the reliability is interpreted in a different way due to one of the basic assumptions in interpretivist research, namely that the researcher influences the research. Here, the reliability refers to how well the observations and interpretations made by the researchers can be understood and explained, thus establishing authenticity of the findings (Collis and Hussey, 2014). Yin (2014) states that it was common to not sufficiently document the research procedures in a case study, resulting in low reliability. With this in mind, we were very careful with being clear and transparent regarding the methods used when conducting our study, as well as establishing protocols and procedures when using them. An example of this is the three different rounds of interviews conducted, where the process of preparing, conducting and summarizing the interviews were the same for each round. Furthermore, within each round the interview questions and the topics covered during the interviews were very similar, even though the data gathered were specific for each interviewee (Denscombe, 2003).

2.7.3 Generalizability
As previously mentioned, there are some challenges in generalizing the findings of a case study to other cases, especially when it comes to the statistical generalizability. For this reason, it was deemed to be important to achieve a high analytical generalizability. Collis and Hussey (2014) argue that it is possible to achieve sufficient generalizability of a single case study under an interpretivist paradigm by identifying patterns, concepts and theories and investigate whether they are valid in other contexts. To succeed with this, we needed to have a detailed understanding of the phenomena we have been studying, which was achieved by investigating the various strategy processes within the case company on a thorough level.

To generalize the findings from our case study, we needed to develop an understanding of how the strategy breakdown process was adopted by other companies in various contexts and how our findings can be applied to these cases. This was conducted as a part of the literature study where common patterns and characteristics within these processes were identified. By applying our findings within these contexts, analytical generalizability of the case study could be established.
3. Theoretical Framework

This chapter will provide a thorough background of the theories regarding strategy implementation in a project-based organization, as well as define necessary concepts for understanding the various processes and methodologies used for implementing strategy.

3.1 Definition of strategy

The concept of strategy can be traced back to the ancient military. In this context, strategy referred to the best approach of winning a war (Imratanakul and Milosevic, 2007). The strategy concept transformed into how a firm can position itself in a competitive environment and what activities need to be done to gain a desired position (Chaffee, 1985). Kaplan and Norton (2004) argue that the strategy of an organization describes how value is created for the shareholders, customers and citizens. Over time, both the concept of strategy and the strategic management processes started to be viewed as dynamic processes (Mintzberg and Quinn, 1996). The strategic management process describes the different methods that are used for deriving strategies and the various phases for the formulation and implementation of these within an organization (Steyn, 2004). Strategy was no longer only related to top management but rather, it started to be accepted as something that is of interest for the whole organization (Artto and Dietrich, 2004).

3.1.1 Project management and strategy implementation

Research has shown that projects have been recognized as ‘powerful strategic weapons, initiated to create economic value and competitive advantage’ by Shenhar et. al. (2001, p. 699). This linkage between projects and strategy execution by projects has been supported by a number of researches such as Englund and Graham (1999), Dietrich and Artto (2004), Dietrich and Lehtonen (2005) and Meskendahl (2010). Turner (2008, p. 5) has done extensive research within this field and defines a project as ‘A project is a temporary endeavor undertaken to create a unique product, service, or result’. Furthermore, he adds that a project has a beginning and is brought to the end either when the objectives of a project are fulfilled or when a project is terminated if it is deemed necessary, for instance because it is no longer needed. The end result of a project is unique, even though the procedures used to obtain the final result might not be. A project can involve one person, a single or a multiple organizational units. Finally, a project can be used to develop a new product or service or implement a new business process/procedure among others (Turner, 2008). Project management is defined by Turner (2008, p. 6) as: ‘Project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements’. It includes activities such as identification of project requirements, addressing the needs of stakeholders and taking into consideration the project scope, budget and time among others (Turner, 2008).

The importance of the project management process has been recognized in this field of science. Milosevic and Srivannaboon (2006) define it as a management process used to achieve an organization’s business goals and strategy within a schedule and budget limit. Additionally, Srivannaboon and Milosevic (2006) argue that project management is a way to achieve business goals and strategies and execute the strategy of the organization, which is also supported by Grundy (1997) and Dietrich and Lehtonen (2005). Jamieson and Morris (2004) describe the project management process as a way of translating the business strategy into a project strategy and in this way, realize an organization’s strategy.

Projects are often associated with a project-based organization. A project-based organization is an organization in which a major part of the business activities are conducted in forms of projects...
concerns such as defining how the goals and objectives at the corporate level of the organization are realized through the transformation of these into various investments and initiatives such as projects and programs (which is a collection of several projects and will be described in more detail later in this chapter). This can be done by the usage of either strategic buckets or road-mapping. The aim of the road-mapping approach is to use an organization’s strategy in order to create initiatives through which it can be realized, whereas the aim of the strategic bucket approach is to categorize various investment projects that are in line with strategy (Chao and Kavadias, 2008) and allocate resources according to these projects (The Enterprise Portfolio Management Council, 2009).

The Top-Down approach has also been discussed by Hill and Jones (2001), who developed a model of components of the strategic management process. As Jamieson and Morris (2004, pp. 179) describe the model: ‘This model indicates that strategy formulation flows from an organization’s mission and goals through functional, business and corporate level’. The three levels through which strategy flows in this model, the corporate, business and functional level, have been recognized by various studies (Varadarajan, 1994); Steyn, 2004; Arto and Dietrich, 2004) and each level has a different focus and perspective on strategy (Artto and Dietrich, 2004). To ensure that there is alignment of strategy, various objectives and strategies are formulated at each level and cascaded down (Jamieson and Morris, 2004).

The corporate level

The main question that is considered at the corporate level is what kind of business the organization is to operate in (Varadarajan and Clark, 1994; Artto and Dietrich, 2004). The corporate strategy concerns issues such as defining how the goals and objectives at the corporate level of the organization are realized through the transformation of these into various investments and initiatives such as projects and programs (which is a collection of several projects and will be described in more detail later in this chapter). This can be done by the usage of either strategic buckets or road-mapping. The aim of the road-mapping approach is to use an organization’s strategy in order to create initiatives through which it can be realized, whereas the aim of the strategic bucket approach is to categorize various investment projects that are in line with strategy (Chao and Kavadias, 2008) and allocate resources according to these projects (The Enterprise Portfolio Management Council, 2009).
organization can be achieved. For this reason, various purposes and policies that define the company and its business are formulated (Jamieson and Morris, 2004). Other issues that are taken into consideration at this level concern decisions about potential mergers and joint ventures with other firms (Steyn, 2004), diversification and resource allocation through the business and its units. The strategy at this level forms the corporate structure (Hrebiniak 2006). At the corporate level, the strategy has a financial focus and for this reason, the main stakeholders are the organization’s shareholders (Steyn, 2004).

The business level

Once an organization has decided in what kind of business it wants to compete, it is time to consider the approach of competing in that specific business and maintaining its competitive advantage (Mintzberg and Quinn, 1996; Varadarajan and Clark, 1994; Steyn, 2004). Some examples of issues concerned at the business level are leverage or organizational skills and resources, product quality and pricing policy (Varadarajan and Clark, 1994). At this level, strategies have a market focus and the main stakeholders are customers and other stakeholders in the organization’s value chain (Steyn, 2004).

The functional level

The functional strategy concerns how each key functional area within an organization can use its resources and how they all together can collaborate in order to implement the strategy of the organization. Due to their different nature and tasks, each functional area contributes differently to the strategies at various levels and for the same reason, has different stakeholders. Being the on the bottom of the hierarchical strategy level, the result is that the functional strategy supports all the strategies above it (Steyn, 2004).

In contrast to the Top-Down approach, the Bottom-Up approach is initiated at a lower organization level, often as various investment opportunities that arise in projects or programs. These opportunities need to be prioritized in order to ensure that the best proceeded further. In order to do this, a strategic criteria needs to be in place within project evaluation and selection processes. For this reason, the Bottom-Up approach is closely associated with the selection of the right projects (The Enterprise Portfolio Management Council, 2009). Cooper et. al. (2001, pp. 361) stresses on this by stating ‘Portfolio management for product innovation-picking the right set of development projects-is critical to new product success’. The authors argue about the importance of sufficient portfolio management in order to choose those projects that are aligned with the strategy and thus, can realize it when executed. Meskendahl (2010) supports the importance of project portfolio management and he develops a model which describes the link between the success of a project portfolio and the success of the business, which he too argues is achieved by choosing the right projects. The theme of project portfolio management will be discussed in more detail later in this chapter.

Finally, the last approach of achieving strategic alignment is through a mixture of Top-Down and Bottom-Up approach. This approach is initiated at the top by using the strategic buckets and roadmaps, but also selecting the right projects at the bottom. In this way, it is believed that this approach will result in a portfolio, which contains projects that are needed to be executed in order to realize the strategy and achieve success. Iterations of the Top-Down and the Bottom-Up processes are conducted in order to ensure that they are in line with each other (The Enterprise Portfolio Management Council, 2009).
In the remaining sections of this chapter, challenges when implementing strategy will be presented. Thereafter, three different ways of implementing strategy within a project-based organization will be reviewed: through the Balanced Scorecard, project portfolio management and programme management.

3.1.3 Challenges when implementing strategy
Several studies have recognized the issue of implementing strategy (Beer and Eisenstat, 2000; Hrebiniak 2006), e.g. Hrebiniak (2006, p. 12) states that ‘One basic problem is that managers know more about strategy formulation than implementation’. Similarly, Giles (1991, p. 75) states: ‘However, even in the best run organizations, implementation often falls far short of the goals that the corporation has set itself’. Further research has been done into the challenges with strategy implementation and three key, reoccurring areas have been identified: communication, commitment and leadership (Alexander, 1985; Giles, 1991; Aaltonen and Ikävalko, 2002; Franco and Bourne, 2003).

3.1.3.1 Communication
Miniance and Falter (1996) define communication as a key factor when it comes to strategy implementation. Similarly, Peng and Litteljohn (2001) recognize communication as a vital element for strategy implementation within an organization. Moreover, the concept of ‘corporate communication strategy’ is been discussed by Steyn (2004), who highlights the importance of integrating communication as a function of the strategic management function. Furthermore, Kaplan and Norton (2005) discuss the importance of communicating strategy, targets and initiatives to the employees in order to ensure their contribution of the realization of strategy. In other words, communication has been discussed in the context of strategy implementation. The underlying reason for this is that several issues within strategy implementation can be associated to communication within organizations.

The first issue regarding communication observed by Beer and Eisenstat (2000) refers to poor vertical communication within organizations. This refers to the employees’ inabilities of having a dialogue with managers regarding various issues and problems that they have observed. The importance of two-way communication is also highlighted by Schnap (2012) who links vertical communication with obtaining strategic consensus within organization, which in its turn is argued to be needed for successful strategy implementation. The importance of using communication to obtain employees’ consensus regarding strategy implementation and achieving strategic goals is also supported by Ho et. al. (2014). Additionally, the authors discuss the role of the organization’s salespeople in this context by stating: ‘...clear communication of customer strategy helps salespeople better understand their customers’ needs’ (Ho et. al., 2014, p. 46).

Secondly, another issue brought up by Hrebiniak (2006) is that strategy is implemented by a greater amount of people than what is required to formulate it, which challenges both the vertical and horizontal communication. Due to a large amount of people, it becomes more difficult to create links between tasks of individual employees and strategic objectives of the organization, which is supported by Aaltonen and Ikävalko (2006). Additionally, unclear responsibility descriptions make it more challenging for managers to share information across the organization with relevant employees (Hrebiniak, 2006). This is supported by Kaplan and Norton (2008), who highlight the importance of having an internal communication plan directed towards the employees. The plan should contain clear and specific strategic goals that are needed to be achieved and what is needed to be executed in order reach these. They also stress on the importance of investing time to
successfully communicate the communication plan to the employees in order to ensure that the message will be received.

Thirdly, Aaltonen and Ikävalko (2002) also recognize the issue of communication. In their research, they observed that the major part of organizations have a large amount of strategic top-down communication, in written and oral forms. As the authors point out ‘A great amount of information does not guarantee understanding, which was the concern of many interviewees’ (Aaltonen and Ikävalko, 2002, p. 416).

Finally, Aaltonen and Ikävalko (2002) highlight the role of the middle managers, which are responsible for ensuring that the strategic information flows throughout an organization. Furthermore, Beer and Eisenstat (2000) argue that when strategic communication contains conflicting strategies and priorities, the result is resource battle within a suffering organization. Additionally, Aaltonen and Ikävalko (2002) found in their research that the middle managers play an important role when it comes to strategy implementation, which is supported by Bushardt et al. (2011) and communication strategies, which is supported by Bartlett and Goshal (1996). They stress on the fact that middle managers are responsible for ensuring that the employees understand the strategy that is being communicated within the organization. In fact, their research showed that the communication between managers and their subordinates was of a greater weight than the formal strategy communication. Dobni (2003) supports this and further argues that it is the managers’ task to identify and solve problems that cause ineffective communication. Rapert et al. (2000) also highlights the importance of that managers play an important role when it comes to communication, especially concerning its understanding and commitment by the employees.

### 3.1.3.2 Commitment

The first issue associated with commitment and strategy implementation concerns employee involvement in various processes related to strategy. According to Hrebiniak (2008), successful implementation of strategy within an organization postulates commitment of employees. With this, he means that the employees need to have ownership of the processes and actions that are linked to strategy implementation, which is supported by Giles (1991). Hrebiniak (2006) explains that planning and execution of strategy are interdependent processes and for this reason, he highlights the importance of the participation of employees being closely linked to strategy execution, in the planning and formulation processes, which is supported by Radomska (2012). Additionally, Alexander (1985) too stresses on the employee participation in strategy implementation processes. He argues that by involving middle and low-level managers as well as key subordinates, their commitment will increase.

Secondly, it is also highlighted by Yemeshvary (2013) that when managers involve the employees in all stages of BSC implementation, the employee engagement increases, which as a result leads to effective strategy implementation.

Furthermore, Sabourin (2015) discusses the importance of leadership when it comes to gaining employee commitment. He discusses five drivers of performance of a successful manager and the most crucial driver is the “driver of emotions”, since the most important obstacles within strategy implementation can be connected to it. The driver of emotions concerns how to overcome the obstacles associated with employees’ commitment to the objectives of their manager. A successful leader achieves commitment by conviction rather than forcing his objectives. Therefore, it is essential to answer the question ‘why our people should make things in a different way?’ By encouraging the employees to develop their own convictions, they will better understand the
linkage between their tasks and the objectives that are reached if the tasks are executed. Additionally, commitment is created by managers by understanding existing problems and use communication to engage discussions among employees within different departments and in this way, create consensus by solving any conflicting opinions.

Finally, Arooj et al. (2012) discuss the importance of leader participation in the formulation and implementation of strategy. They also highlight the fact that not only must a leader itself participate, but a leader should also ensure both horizontal and vertical involvement of the employees and develop commitment of employees. They argue that ‘Without the involvement of everyone the organizational goals can’t be achieved’ (Arooj et al., 2012, p.34).

3.1.3.3 Leadership
A third issue of poor strategy implementation is lack of sufficient leadership. As previously mentioned, Sabourin (2015) discusses five drivers of performance of a successful manager. All five drivers need to be in place in order to achieve success in strategy execution and realization of an organization’s objectives. The most important driver, the driver of emotions, has already been presented. Two other drivers relevant to this case study will be presented below, in the descending order or importance from the aspect of strategy execution.

Driver of initiatives
On the second place after the driver of emotions comes the driver of initiatives. This driver concerns the task of creating projects from the manager’s objectives as the base and create responsibilities for the employees. In the ideal case, each employee is involved in the project. The question that needs to be answered by this driver is 'Who has to be the champions and the bearers of our initiatives?'. The results of this driver are to create responsibility and initiative-taking of the employees. Additionally, the focus is on reaching the goals as a united team instead of individual success.

Driver of rules
The third most important driver concerns with the fact that a manager needs to clarify and understand his objectives and align these with his colleagues. For this reason, answering the question 'how do we have to take ourselves there to reach our objectives?' is central for achieving this driver. This question is answered by setting up rules and principles within an organization and organizes the objectives hierarchically so that they can be reached.

3.2 Balance Scorecard
Balanced Scorecard (BSC) is a performance measuring system that was introduced by Robert S. Kaplan and David P. Norton. The aim of the BSC is to translate the vision and strategy of an organization to performance measures in order to create a shared vision of what the organization is aiming to achieve and create, and link efforts of individual employees to the goals of their team (Kaplan and Norton, 1996a). The BSC methodology allows firms to create value for its customers and shareholders from its intangible assets by translating them into measurable performance indicators of an organization (Kaplan and Norton, 2004; Kaplan and Norton, 1996a). Additionally, BSC promotes strategic feedback and learning in order for organizations to receive feedback regarding the current strategy implementation and adjust it if necessary. Before the BSC was introduced, financial accounting models were used, but these do not take into account long-term capabilities investments and customer relationships (Kaplan and Norton, 1996b).
The BSC takes into account the financial perspective, however, it complements it with three additional perspectives when measuring the performance of an organization: customer, internal-business-process and learning and growth. Together, these four perspectives form the framework for a BSC and the ‘balance’ in the BSC means that there needs to be a balance between the four perspectives, that is, all four perspectives needs to be of an equal importance. The BSC take into account both the short- and the long-term financial performance and additionally, the competitive performance taken into account by the non-financial perspectives (Kaplan and Norton, 1996b). The BSC creates a dialogue and communication process throughout the organization, both regarding the formulation and implementation of the strategy. In this way, it is ensured that all employees within an organization understand the goals and strategy that will be used for achieving these, thus the objectives of the business unit. The importance of employee participation in the process of creation of the BSC has also been recognized by researchers. Chavan (2009) explains that the BSC is designed in such a way that the various levels within an organization are invited to participate in its creation and in this way, collectively contribute to the realization of the objectives of the organization. For this reason, it is highlighted that ‘The balanced scorecard requires understanding, commitment and support from the very top of the business down’ (Chavan, 2009, p. 405). For this reason, commitment will be gained. Finally, the BSC should not be seen only as a measurement system, as it reaches its full potential when it is treated as a management system (Kaplan and Norton, 1996b). A template for a BSC is shown in Appendix A.

3.2.1 The four perspectives of a Balance Scorecard

The four perspectives of a BSC are the financial, customer, internal-business-process and learning and growth. The aim of the financial perspective is to represent the long-term goal of an organization that is investing capital to gain returns. All objectives and measures in the remaining three perspectives of the BSC should be linked to the financial perspective. In this way, the BSC connects all actions within all perspectives that need to be executed in order to achieve the aim of the financial perspective (Kaplan and Norton, 1996b). Secondly, the customer perspective aids to identify the target customer and market segments and translates its mission and strategy to objectives regarding these. This perspective aids to identify the value propositions that will be delivered to its target customers in order to obtain loyalty and satisfaction. The customer perspective measures for instance customer satisfaction and market share, which are lagging measures since they are not known until it is too late to affect them (Kaplan and Norton, 1996b). Thirdly, the internal-business-process perspective aids to identify key processes for achieving the objectives of the customer and the shareholders segments. There are three main categories of business processes: innovation (creating products or services for emerging or latent customer needs), operations (existing products or services) and post-sale service (service to customer after the sale). The internal-business-process perspective is measured from the financial aspect, such as cost, but also with measures of for instance quality and new product introductions (Kaplan and Norton, 1996b). Fourthly and lastly, the learning and growth perspective encourages the organizational learning and growth by developing proper objectives and measures, which are then used to achieve outcomes of high quality in the remaining three objectives of the BSC (Kaplan and Norton, 1996b).

3.2.2 Linking the Measures in the Balance Scorecard to Strategy

The various measures within the four perspectives need to be linked, in order for the BSC to reach its aim and achieve current and future financial performance (Kaplan and Norton, 1996a). For this reason, a well-constructed BSC should contain cause-and-effect relationships chains, which can be
seen as if-then statements that tell the strategy of a business unit. In order to obtain a sufficient link, the cause-and-effect relationships chain should cover all four aspects of the BSC (Kaplan and Norton, 1996a; Kaplan and Norton, 1996b). The cause-and-effect relationships are constituted of outcome measures (lag indicators such as profitability and market share) and performance drivers of these outcomes (lead indicators such as cycle times) that are unique for each business unit with regard to its strategy. The relationship between these two is of a great importance: ‘Outcome measures without performance drivers do not communicate how the outcomes are to be achieved’ (Kaplan and Norton, 1996b, p. 150). A good BSC is required to have a mix of outcome measures and performance drivers that are tailored to the strategy of a business unit (Kaplan and Norton, 1996a; Kaplan and Norton, 1996b).

3.2.3 Taxonomy of Balance Scorecard implementation in organizations

Several studies have shown that BSC is a widely used concept. Bain & Company has, on a yearly basis, conducted a survey since 1993 to identify the 25 most popular management tools. The results have showed that the total usage of the BSC method has varied and the current utilization rate is currently approximately 40% (Rigby, 2015). Due to the wide usage of the method, several researches have developed taxonomies for classification of the implementation of the BSC within the organizations. The reason for this is that the research has shown that many companies face challenges when implementing the BSC methodology into a practical tool. As Soderberg et. al. (2011) state, poor implementation leads to poor usage of the methodology. For this reason, several researches have developed taxonomies, which can be used to determine how well a firm uses its BSC. For instance, Speckbacher et. al. (2003) develop a three-level classification of BSC, which was developed into a five-level taxonomy by Soderberg et. al. (2011), illustrated in figure 3 on the next page.
Soderberg et al. (2011) identify two categories of attributes of BSC. The first category is related to the three elements of the structure of the BSC and the second category refers to the use of the BSC in order to manage the organization. This model is based on the theory of BSC described in previous sections, thus, some parts of the model will be summarized while others will be described more in detail.

Structural attributes of the BSC:

- **The measures are derived from the strategy of the organization**: The measures of the BSC need to measure the activities through which strategy is implemented.
- **There is a balance among the measures**: Each perspective should have an equal amount of measures and there needs to be a balance between the outcome measures and performance drivers. Additionally, there needs to be a balance between the financial and non-financial measures.
- **There is a causal link (cause-effect relationships) among the measures**: At least one measure in each dimension must be linked to a measure in another dimension.

Use attributes of the BSC:

- **Double-loop learning**
- **Tie-in to compensation**

The meaning of the structural attributes has been discussed previously in this section. Additionally, the importance of using BSC as a feedback tool has also been mentioned and it can be achieved through the use attributes of the BSC. Double-loop learning occurs when the results of an organization deviate from the expected results. In this situation, the management needs to question...
the underlying assumptions about their value proposition, market conditions, competitor behavior and internal capabilities, and based on this, modify the strategy to create new opportunities if the current strategy has showed to no longer be sufficient (Kaplan and Norton, 1996a). According to Kaplan and Norton (1996a), the application of the double-loop learning process is fundamental for successful implementation of a strategy. The second use attribute of the BSC, the tie-in to compensation, refers to tying compensation to BSC measures. According to Kaplan and Norton (1996b), incentive compensation should be established and based on achievements of the objectives of the BSC. It is argued that the relationship between incentive compensation and achievement of the BSC objectives needs further experimentation. However, in the short-term, tying senior management incentives to BSC objectives will align their commitment to the overall goals, rather than promoting this alignment on lower levels of organization such as functional departments (Kaplan and Norton, 1996b).

3.2.4 The strategy map
The strategy map is a visual representation of how value is created in an organization and is used in order to facilitate communication regarding the linkages within the BSC at the executive level. There is a template for creating a strategy map (see Appendix B) and if one element is missing in a strategy map of a company, the strategy is probably not sufficient. The strategy map constitutes of five principles (Kaplan and Norton, 2004):

*Strategy balances contradictory forces*
This principle regards the conflict between the short-term financial performance and the long-term revenue growth. Short-term results can be prioritized on the expense of long-term goals. For this reason, the strategy should describe how to achieve the balance between these two perspectives.

*Strategy is based on a differentiated customer value proposition*
The targeted customer segments should be identified and value proposition for these segments should be clearly defined.

*Value is created through internal-business-processes*
Strategy is driven by the internal business processes and for this reason, it is of a great importance to identify key processes that will both create and sustain value and implement the strategy of the organization.

*Strategy consists of simultaneous, complementary themes*
As previously mentioned, there are different types of internal-business-processes and for this reason, benefits from these processes are created at various points of time. For instance, innovation processes deliver benefits later in time than operational processes. For this reason, a balance is needed within strategies and thus, key internal-business-processes should be identified in the various categories of business processes within an organization.

*Strategic alignment determines the value of intangible assets*
In order to create value from the intangible assets, they must firstly be defined and then integrated with the key internal-business processes. Additionally, to achieve strategic success, the intangible assets need to support the strategy of the organization by generating economic results.

3.3 Portfolio management
As previously mentioned, one way to manage multiple projects is through portfolios and portfolio management (Artto and Dietrich, 2004). A portfolio is defined by PMI (2008, p. 8) as
‘a collection of projects or programs and other work that are grouped together to facilitate effective management of that work to meet strategic business objectives. The projects or programs of the portfolio may not necessarily be interdependent or directly related’.

This definition is found in other portfolio theory as well, with small variations (Meskendahl, 2010; Artto and Dietrich, 2004).

Project portfolio management is a dynamic decision process often done in committees (Jugend and da Silva, 2014; Artto and Dietrich, 2004), which includes evaluation, prioritization, resource allocation, authorizing and selecting projects in line with strategy (PMI, 2008; Cooper et. al., 2001; Archer and Ghasemzadeh, 1999; Cooper et. al., 1999; Englund and Graham, 1999). Project portfolio management is the most common technique used to address the project selection problem and the alignment of the project portfolio with strategic goals (Kaiser et. al., 2015). Cooper et. al. (2001, p. 361) states that ‘Portfolio management is the manifestation of your business’s strategy – it dictates where and how you will invest for the future’, which is in line with opinions of other researchers such as Hyväri (2014) and Unger et. al. (2012).

3.3.1 Conceptual framework

In this section, strategy implementation through project portfolios and project portfolio management will be reviewed, with the conceptual framework developed by Meskendahl (2010) as the foundation. The framework aims at establishing a close link between business strategy, project portfolio management and business success, i.e. closing the gap between strategy formulation and implementation. In this way, an effective and successful strategy implementation is ensured (Kaiser et. al., 2015).

The framework, which is illustrated in figure 4, consists of four parts that will be the foundation of the literature review in the remainder of this section: (1) strategic orientation, (2) project portfolio structuring, (3) project portfolio success and (4) business success.

![Meskendahl's conceptual framework](image-url)
3.3.1.1 Strategic Orientation

The strategic orientation is connected to how the organization decides to compete in the industry it is active in, in comparison with its competitors, e.g. the corporate mindset of the organization. Strategic orientation consists of three dimensions: (1) analytical posture, (2) risk-taking posture and (3) aggressive posture. These three dimensions have an effect on both the project portfolio structuring and its success, and determine to which degree a firm is aligning the portfolio selection with the overall strategic objectives (Meskendahl, 2010). Additionally, Kaiser et. al. (2015) argues that the context in which the organization operates is an additional factor that has a large impact on the strategy formulation.

3.3.1.2 Project Portfolio Structuring

The Project Portfolio Structuring developed by Meskendahl (2010) includes four dimensions: (1) Consistency, (2) Formalization, (3) Integration, and (4) Diligence.

The first dimension regards the consistency of the project portfolio with the business and corporate strategy, which describe how closely together portfolio and strategic planning are linked. The second dimension is formalization, which analyzes the consistent application of the same methods to all projects and include factors such as suitable and accurate data, transparent procedures and explicit and objective criteria. The third dimension, integration, concerns the extent of involvement of the corporate functions in the portfolio decision process. The fourth dimension is diligence, which address the “mix” in the portfolio regarding long- and short-term perspectives, and whether the organization has a vision of a target portfolio.

The Project Portfolio Structuring stated by Meskendahl (2010) is based on project portfolio selection, defined by Archer and Ghasemzadeh (1999, p. 208) as

‘the periodic activity involved in selecting a portfolio, from available project proposals and projects currently underway, that meets the organization’s stated objectives in a desirable manner without exceeding available resources or violating other constraints’.

The importance of strategic planning and the linkage with the portfolio, which is connected to the first dimension presented by Meskendahl (2010), are supported by Acur, et. al. (2012), who argues that strategic planning and innovativeness trigger the adoption of strategic alignment. The most important factor concerning the strategic alignment of project portfolios to strategic goals is the project selection (Kaiser et. al., 2015). The project selection has to be performed without exceeding the firm’s available resources or other limitations, in order to have a positive relation to the project portfolio success (Meskendahl, 2010). If a project-based organization is to achieve a higher degree of business success, it is of major importance to select the right projects (Kaiser et. al., 2015; Unger et. al., 2012; Meskendahl, 2010; Jamieson and Morris, 2004; Shenhar et. al., 2001). However, this is not an easy task, since the available projects a firm selects from often exceed the number of projects the firm can perform simultaneously, due to limited resources (Engwall and Jerbrant, 2003).

The most popular methods for portfolio selection are financial methods, business strategy methods, bubble diagrams, scoring models and checklists. The financial methods dominate the portfolio management techniques for selecting projects and aims at maximizing the portfolio value (Jugend and da Silva, 2014; Cooper et. al., 2001; Cooper et. al., 1999). Even though the selection based on financial criteria is the most popular method when prioritizing in the project portfolio, it yields the poorest performance results (Cooper et. al., 2001; Cooper et. al., 1999). Jugend and da Silva (2014) argue that one reason for the poor performance results is because, by ranking the potential projects by economic value, more innovative or high-risk projects are discouraged. Therefore, it is risky to
only use this type of evaluation, since it might not accurately predict the demand or the long-term effect of radical innovations.

The strategic approaches to portfolio selection techniques perform the best and entails selecting projects with the strategic alignment with the business strategy as a foundation, for instance by using strategic buckets (Cooper et. al., 2001; Cooper et. al., 1999). Scoring models and similar ranking methods often yields a portfolio with high-value projects, since the potential projects are ranked based on various criteria (Jugend and da Silva, 2014; Cooper et. al., 2001; Cooper et. al., 1999). Furthermore, the selection of the “right” projects is connected to Meskendahl’s (2010) fourth dimension, diligence, and is important for the alignment between the portfolio and the strategy.

In line with the dimension of formalization stated by Meskendahl (2010), Jugend et. al. (2014) argues that the formalization of management methods such as evaluation, strategic planning and portfolio reviews results in a more successful portfolio management. However, Dietrich and Lehtonen (2005) emphasize that formalization do not always fit all organizations, some organizations do better with less formal procedures.

Kester et. al. (2011, 2014) argues that the portfolio decision-making of an organization, hence the portfolio selection, is most effective when the decisions made are based on three organizational objectives: (1) portfolio mindset, (2) focused effect, and (3) decision-making agility. An embedded portfolio mindset implicates that the management decisions are based on a complete understanding of each project in the portfolio as well as their alignment to the strategy and long-term goals of the organization. This relates to the consistency of the project portfolio and the business and corporate strategy, discussed by Meskendahl (2010). Unger et. al. (2012) argues that project termination is important to achieve the strategic fit of the portfolio to the strategy. The second organizational objective is the focused effect, which entails having the long-term success in mind when selecting projects. There should also be a mix between short-term and long-term projects in a portfolio (Engwall and Jerbrant, 2003). Additionally, Kester et. al. (2011, 2014) states that being an agile organization that can respond to new technology or changes in the project portfolio fast, is also very important for effective portfolio decision-making, thus it is the third organizational objective. Depending on the decision-making type, an organization might have a more or less effective portfolio decision-making process.

Kester et. al. (2011) presents three diverse types of decision-making that have an effect on how well organizations achieve the organizational objectives, hence successful portfolio selection.

1. Evidence-based decision-making, in which the portfolio selection is based on well-grounded empirical evidence and objective information.
2. Power-based decision-making, in which there is unequal distribution of power.
3. Opinions-based decision-making in which the portfolio selection is based on overall feelings and personal experience.

An organization practicing evidence-based type of decision-making are more likely to make decisions based on a portfolio mindset, since the selection is based on well-supported cases that are clearly connected to the strategy. However, the need for such well-supported cases has some disadvantages. Namely that the organization becomes less agile, due to the time required to gather the information, and that the organization invests less in radical innovations, since the required information is scarce for this type of innovation (Kester et. al., 2011). Even though this increases the strategic fit of the portfolio, radical innovations that contribute on a long-term basis might be lost (Englund and Graham, 1999). The evidence-based type of decision-making is closely connected to
cross-functional collaboration, since input from different divisions within the organization is needed to create a well-grounded case. In power-based decision-making radical innovation is more common, due to the fact that individual managers can select projects based on their own preferences. However, the risk for not selecting projects in line with strategy increases, which is the case of opinion-based decision-making as well (Kester et al., 2011). Organizations often have a combination of these decision-making types.

Common for the portfolio selection theory is that it strives for portfolio success, defined by Cooper et al. (1999) as the maximization of the financial value of the portfolio, the linkage of the portfolio to the strategy of the organization and achieving a balance within the portfolio. Kester et al. (2014) argues that balance within the portfolio regarding short- and long-term projects, as well as radical and incremental innovation, is a prerequisite for developing a portfolio that both delivers maximal value and is in line with the strategy of the organization.

3.3.1.3 Project Portfolio Success
The definition of Project Portfolio Success used by Meskendahl (2010) is based on the definition by Cooper et al. (1999), which represents three of the four dimensions in this part of the conceptual framework. The concept is, however, developed further by Meskendahl (2010), whom also include the single project success as a dimension, based on the research done by Martinsuo and Lethonen (2007). Thus, the four dimensions are: (1) Average single project success, (2) Use of synergies, (3) Strategic fit, and (4) Portfolio balance.

The first dimension, the average single project success, is a necessary part for a successful project portfolio management, however, it is not a sufficient condition of its own (Jerbrant and Engwall, 2003). The use of synergies dimension regards the utilization of synergies that are created when arranging the portfolio. The first two dimensions of the Project Portfolio Success address the fulfillment of project objectives such as quality and time and the interdependencies between the projects, respectively. The third dimension covers the strategic fit of the portfolio with the business strategy, which is an area that has not been studied sufficiently (Meskendahl, 2010; Jerbrant and Engwall, 2003). The fourth dimension considers the balance of the portfolio. All four dimensions are a requirement if the project portfolio is to be successful.

Another aspect for the project portfolio to be successful is the structural alignment of the organization with the needs of the project portfolio management, which according to Kaizer et al. (2015) is of significant importance.

The Factor map
To evaluate the performance of the portfolio methods used, thus also the success of the portfolio, Cooper et al. (1999) has developed a Factor map in which businesses can be categorized. Cooper et al. (1999) categorizes businesses into four different clusters: Cowboy Businesses, Crossroads Businesses, Duds and Benchmarks. In which cluster a business is categorized depends on two factors: the overall quality rating and the management fit of their project portfolio, which also are key drivers of portfolio performance. The relationship between the clusters and key drivers is illustrated in figure 5. The overall quality rating refers to the realism and user friendliness of the selected portfolio method. In addition, the first factor includes how management rates the method, if it is actually used in the decision-making and if they would recommend their portfolio method to others. The second factor, management fit, consists of the fit of the portfolio method chosen with the decision-making style of the management, if the management understands the chosen method and also if they deem it efficient, e.g. does not waste time and makes the right decision.
Figure 5: Factor map with the four clusters (Cooper et. al., 1999)

The first cluster, the Cowboy Businesses, ‘shoot from the hip when it comes to project selection and portfolio management’ (Cooper et. al., 1999, p. 341). The businesses within this cluster do not have much of a model or system for their portfolio management at all, the model is simplistic and inadequate in decision-making. However, the approach is liked by management and is deemed to be efficient and fit the decision-making style of the business, thus placed in the upper left quadrant of the factor map.

The businesses belonging to the Crossroads businesses cluster are the opposite of the Cowboy Businesses, as can be seen in figure 5 were these businesses are placed in the lower right quadrant. The portfolio methods used in these businesses are highly recommended and realistic. They are, however, not fully embraced by the management. Management deemed that the methods do not fit the decision-making style and that they are not efficient enough.

The model deems the Duds as the least successful, where the portfolio methods neither fit the management decision-making style nor are perceived as effective. This implies that the portfolio methods in these businesses are not realistic or user friendly, as well as not used or understood by management. The Duds cluster is placed in the bottom left quadrant.

The cluster that exceeds the others is Benchmarks, which is placed in the upper right corner and is the opposite of the Duds cluster. The businesses in this cluster are characterized by formalization and having an efficient and high-quality portfolio method that is used and understood by management, as well as fits their decision-making style. Cooper et. al. (1999, p. 342) states that ‘Benchmarks are the “good” businesses – the ones held up as benchmarks or standards against which to compare oneself and/or to emulate’. The Benchmark businesses use a combination of both a financial and strategic selection techniques.

Cooper et. al. (1999) argues that businesses should strive for being a part of the Benchmarks cluster, since this is the cluster with the highest performance, resulting in a portfolio of high-value projects that is aligned with strategy and balanced both regarding the long- and short-term and the number
of projects, which was the definition of Project Portfolio Success (Kester et. al., 2014; Kester et. al., 2011; Meskendahl, 2010; Cooper et. al., 1999).

### 3.3.1.4 Business Success

The fourth and last part of the conceptual framework is Business Success, in which Meskendahl (2010) include two of the four dimensions suggested by Shenhar et. al. (2001). Namely: (1) Economic success and (2) Preparing for the future, where the former is considered from a short-term perspective and the latter from a long-term perspective. Meskendahl (2010) argues the other two dimensions suggested by Shenhar et. al. (2001), project efficiency and impact on the customer, are already covered in the framework. The economic success dimension regards the market- and commercial performance, while the preparing for the future covers ‘the sufficiency of new technologies and competencies developed within the portfolio’ (Meskendahl, 2010, p. 810).

### 3.3.2 Project Management Office

Having considered projects and portfolio management, it is now time to take a look on the Project Management Office (PMO). The Project Management Institute defines PMO as: ‘An organizational body or entity assigned various responsibilities related to the centralized and coordinated management of those projects under its domain. The responsibilities of the PMO can range from providing project management support functions to actually being responsible for the direct management of a project’ (PMBOK, 2004, p. 369).

Some other examples of functions of a PMO are project definition and planning, monitoring and controlling and risk management among others. The PMO is responsible for projects, portfolios and programmes. Additionally, the PMO is considered to be responsible for linking these projects, portfolios and programmes to the strategy of the organization (Thiry, 2008). Furthermore, Aubry et. al. (2010) stress on the fact that a PMO has positive effect on PPM.

A PMO is constituted of people but its functions can be conducted virtually (Pellegrinelli and Garagna, 2008). Hobbs and Aubry (2007) state that PMOs started to gain popularity during early 1990 and their popularity has been increasing since then. According to Hobbs and Aubry (2008, p. 69), ‘PMOs are complex organizational entities’ and they also state that the various PMOs are different from each other. Unger et. al. (2012) supports this by stating that PMOs can have different roles depending on its purpose. Hobbs and Aubry (2008) have conducted research where they find a typology for PMOs in order to group common characteristics. Müller et. al. (2013) also develop a typology of PMOs based on three identified roles of PMOs and these will be presented below.

#### 3.3.2.1 The three roles of PMO

In the typology of Müller et. al. (2013), three roles profiles of PMO are presented. These are: the superordinate role profile (controlling), the subordinate role profile (serving) and the coequal role profile (partnering). Additionally, they introduce a fourth role profile, which is a balanced profile that does not have any area of focus, in contrast to the other three profiles. These three roles are displayed in figure 6, the PMO role triangle.
The superordinate role profile

By taking a controlling role profile, the PMO acts as a management unit over the projects in its domain. The scope of this role can vary and thus, also their responsibilities. Some examples of the responsibilities of this role are maintenance of standard methods and tools used in project management and conducting project performance evaluation among others. Additionally, this role can be responsible for surveillance over the employees involved in projects, in order to ensure that no mistreatment occurs within projects (Müller et. al. 2013). Unger et. al. (2011) also discuss this PMO role and add that by taking on a controlling role, PMO aims to provide input for decision-making regarding the steering of the project portfolio. To achieve this, an information base, which can provide reliable and sufficient information about single projects and possible improvements, needs to be in place. In this way, the controlling role ensures alignment of single projects to the portfolio.

The subordinate role profile

By taking a serving role profile, a PMO provides various support functions to the projects so that the efficiency of the utilized resources and the outcome effectiveness are increased. This PMO role can provide operational support in the form of trainings and consulting. Also, this role is concerned with the needs of the stakeholders and the overall project performance (Müller et. al. 2013). Unger et. al. (2011) discuss this role as well and add that this role can also be responsible for encouraging organizational learning.

The coequal role profile

According to Müller et. al. (2013), this profile has not been highlighted in the field of PMO research. However, this role profile is responsible for communication between a PMO and other actors within an organization, such as project managers and employees involved in projects. Additionally, Müller et. al. (2013, p. 61) add: ‘More concretely, a PMO takes on a partnering role when it engages in equal
Having presented these three roles, Müller et al. (2013) argue that a PMO often takes more than one of these roles. However, their research has shown that a PMO will most likely have a controlling or serving role profile, where the controlling role is the most common. Additionally, their research has showed that in these roles, the most important functions are monitoring and controlling projects (for the controlling role) and providing various services to project management stakeholders (the serving role).

Another two important areas that are highlighted in the area of PMO field is PMO’s role in organizational learning and decision-making (Müller et al., 2013; Hobbs and Aubry, 2008; 2007). This will be discussed in the next section.

### 3.3.2.2 PMO and organizational learning

The link between PMO and organizational learning has been discussed in this field of research. Hobbs and Aubry (2007) identify five groups of important PMO functions. Their research has showed that one of these groups is the ‘Organizational Learning’. The authors discuss that the organizational learning can be achieved through a PMO by for instance implementing and managing a database of what is learned, conducting reviews after the projects are executed and by managing archives of project documentation. It is stated by the authors that the organizational learning is receiving increased attention by PMOs (Hobbs and Aubry, 2007).

Organizational learning is also discussed by Müller et al. (2013). They argue that the role a PMO takes has an effect on the organizational learning, and this in its turn has an effect on innovation. However, they state that organizational learning is difficult to achieve and it is associated with high costs of establishing new practices within other organizational functions. Obstacles associated with organizational learning are the difficulty of documenting what is learned from executed projects and develop new project management methods or techniques for using what has been learned. In addition, they discuss that dedication for organization learning and innovation is required, and is often missing within organizations. Moreover, they argue that PMOs often lack people who work directly with organizational learning by collecting experiences (Müller et al., 2013).

### 3.3.2.3 PMO and decision-making

According to Hobbs and Aubry (2008), a PMO that has external project customers tend to have more authority regarding the decision-making of projects, compared to a PMO with internal project customers. Furthermore, the authors argue that a PMO is considered to be empowered when it has the decision-making authority. On the contrary, a PMO with no such authority is known as passive. Additionally, the authors discuss that the decision-making of a PMO is one of three important factors that substitute a PMO with higher performance compared to the rest. The remaining two factors are the percentage of projects that are in the mandate of the PMO and the percentage of project managers within the PMO. However, these will not be discussed further as they are not deemed to be included in the scope of this thesis project.

As previously mentioned, Hobbs and Aubry (2007) have identified five groups of PMO functions. The third most important group is called ‘Multi-project Management’ which includes the management of projects and portfolios, and also the processes of identification, selection and prioritization of new projects. This also supported by Unger et al. (2013), who discuss the PMO’s role within the appraisal and selection of projects. The fourth most important group is the ‘Strategic
Management’ and it is about the PMO becoming more involved in the aspect of strategic alignment, for instance by participating in strategic planning (Hobbs and Aubry, 2007).

3.4 Programme management

A programme differs from both a project and a portfolio, and is defined by Ferns (1991) as ‘a group of projects that are managed in a coordinated way to gain benefits that would not be possible where the projects to be managed independently’. Additionally, Pellegrinelli (1997) built on Ferns’ (1991) definition and added that programmes could also define the projects within the programme, as well as provide a direction towards a common goal. Similar to Ferns (1991) definition, PMI (2008, p. 9) defines programmes as ‘a group of related projects managed in a coordinated way to obtain benefits and control not available from managing them individually’.

Programme management refers to the support, planning, prioritization, integration and evaluation of the projects within the programme (Lycett et. al., 2004; Pellegrinelli, 1997; Ferns, 1991). Shao and Müller (2011), Artto et. al. (2009), Lycett et. al. (2004) and Pellegrinelli (2002; 1997) argues that programmes establish a bridge between the strategic goals of the organization and the projects. Furthermore, a programme often is connected to long-term implications, rather than short-term, when compared to projects (Artto et. al., 2009).

3.4.1 Life cycle process

Thiry (2004a; 2004b; 2002) argues that programme management must be an iterative process. Furthermore, the programme management process is closely connected to the strategic formulation and implementation within an organization, and the process consists of five phases. The five phases proposed by Thiry (2010; 2004a; 2004b; 2002) are aligned with the five-phase life cycle process presented by Pellegrinelli (1997), which also argues that the programme management life cycle is not linear. Even though they have not named the phases the same, the content of each phase is very similar.

During the Formulation, which is a decision-making process, opportunities are identified and the best course of action is selected (Thiry, 2010; 2004a; 2004b; 2002). Within the first phase, the initiation of the programme is determined (Pellegrinelli, 1997). The Organization phase regards how the programme can add value, including activities such as selecting and prioritizing the projects and actions within the programme, and determining on the programme structure. During the third phase, Deployment, the performance, benefits and priorities of the projects within the programme are measured, as well as the benefits emanating from the programme. In the Appraisal phase, the programme is reviewed and evaluated in order to make necessary changes for the realignment to the strategy or to terminate the programme (Thiry, 2004a; 2004b; 2002; Pellegrinelli, 1997). Pellegrinelli et. al. (2007) suggests that the context should be of greater attention when evaluating a programme, since contextual factors focus the attention and efforts to re-shape the programme so that it fits the objective for which is was created. The programme review tends to follow an annual cycle driven by budgets (Pellegrinelli, 1997). If it is found that the programme should no longer exist, the fifth phase, Dissolution, are initiated. This phase involves re-allocation of uncompleted work and resources. The five phases of the programme management life cycle are illustrated in figure 7.
In addition to these five phases, Thiry (2010; 2004a; 2002) suggests that programme management should also include both a \textit{performance loop} and a \textit{learning loop}, which addresses the precise plan for the programme and the value management in the programme, respectively.

Lycett et. al. (2004) raises some challenges with programme management. Namely that programme management might result in too much control, diverting energy from value adding activities by compromising the relationship between programme and project managers. Moreover, cooperation between projects within the programme tends to be difficult as a result of resource competition and a failure regarding the organizational learning. Lycett et. al. (2004) argues that these challenges exists as a result from two wrong assumptions in programme management, (1) believing that programme management is equivalent with managing a large project, and (2) that the same programme management approach is applicable in every situation. Crawford and Nahmias (2010) found that practitioners often could not differentiate between project and programme management, which is connected to the two wrong assumptions mentioned above.

Programmes should not be treated as “megaprojects” or scale-up projects, since a programme and a project are not equivalent (Artto et. al., 2009; Lycett et. al., 2004; Thiry, 2004a; Pellegrinelli, 1997; 2005; 2011; Pellegrinelli et. al., 2007; Pellegrinelli et. al., 2015). The time horizon for a programme might be indefinite, which differs from a project that has a fixed duration. Programmes is an organizing framework within which projects can operate that evolves in line with business needs and focus on meeting strategic goals (Pellegrinelli, 2011; 1997; Pellegrinelli et. al., 2007). Unlike portfolio management, programme management is mainly a purposeful strategic decision management process, and a programme can include both projects and non-project activities (Thiry, 2004a; Pellegrinelli, 2011).

Pellegrinelli et. al. (2007) argues that the context in which the programme operates has a large effect on the programme itself, and that the programme management should be determined by the context. Furthermore, Pellegrinelli (2011) suggests that a programme is better than a project concerning the management of content and context characterized by environmental uncertainty and/or complexity, ambiguity etc.
Programmes and the projects it is composed of can facilitate ambidexterity, which is useful for an organization (Pellegrinelli et al., 2015). Moreover, using programmes and projects as complements, not substitutes, can have a positive effect on the organizational performance (Pellegrinelli et al., 2015; Pellegrinelli, 2011).

3.4.2 Three programme types
Pellegrinelli (1997) recognizes three configurations of programmes: (1) portfolio, (2) goal-oriented, and (3) heartbeat.

Portfolio
Portfolio programmes take on a coordinating role by grouping projects that are relatively independent, but have a common theme, to extract synergy benefits. However, the portfolio programme does not define the projects, it only manages them. The management of the projects are done with a focus of efficient resource utilization and leveraging existing knowledge or skills. The portfolio programme has an indeterminate time horizon, since it is valid as long as a new coordination dimension cannot extract greater benefits than the existing coordination, and draws resources from and complements line management.

Goal-oriented
Goal-oriented programmes are used to translate business strategies, either vague, incomplete or evolving, into tangible actions, building on the existing structures, systems and procedures within the organization. Therefore, the definition of projects is an integral part in the role of a goal-oriented programme. This programme configuration has the same time horizon as the objective that is was created to fulfill, i.e. the goal-oriented programme lasts until the objective is achieved or as long as the strategic direction holds. The programme may also evolve during the programmes life cycle, thus it provide a means of dealing with situations where learning is a prerequisite to making progress and where the uncertainty is large.

Heartbeat
Heartbeat programmes are created to tend to the regular improvement of existing systems, infrastructure, or business processes, thus taking on a maintenance and improvement role. These improvements are done in small, regular, incremental steps, thus fits well when an organization is going through a change. During a change, the heartbeat programme aims at maximizing the amount of new functionality or capability delivered to the business, while minimizing the disruption to operations.
4. Empirical Background

This chapter will provide the reader with a background of the organizational structure, product development process, the mission, vision and values, and the strategy processes of the case company, as well as the naval market. This information is a prerequisite for the understanding of the following chapters.

The delineation of the case company is based on information from various sources and has been continuously updated during the thesis, along with the deepening knowledge of the organization. All information regarding the case company is a compilation of completed interviews, observations, gathered internal documents and the company’s intranet.

A complete description of the entire case company will not be provided since it would be an extensive and time-consuming task, which would not contribute to the quality of the thesis. The focus of this chapter will therefore be on providing a necessary background of the processes and areas relevant for the study and which are a prerequisite for the understanding of the challenges the case company currently faces. The case description has been verified with key personnel for the thesis within Saab.

4.1 Organization

The overall organizational structure of Saab is illustrated in figure 8.

Saab is divided into three branches:

- Group functions
- Market Areas (MA)
- Business Areas (BA)

The Group functions branch is liable for ensuring that Saab reaches the vision, mission and goals of the company. Furthermore, this branch is responsible for the Strategy Board, in which decisions of major importance regarding the strategy and the product portfolio are taken. A program aimed at reducing costs in the ongoing work in the organization, by simplifying and improving the effectiveness of the different functions within this branch, was carried out simultaneously as the
thesis. The Group Strategy is one of the eight Group functions, and it is the only function with which this thesis has been in contact with. This function is responsible for execution and transparency regarding the strategy-, product- and market management, as well as group level analysis. In the previously mentioned program, the Group Strategy function was liable for improving the effectiveness by which the strategy flows from the corporate level throughout the organization.

Saab is an international company that exists in more than 100 countries, spread across several continents and markets. To manage the various markets and customers, Saab has divided the world into five pieces. Each piece is represented by a Market Area, which are all managed by the MA branch. This organizational structure was implemented four years ago, and is therefore fairly new.

The BA branch is structured as a line organization, were each BA is self-contained, has a clear chain of command and is measured by its profit and loss. The BA’s are constructed of several Business Units (BU). There are a total of five BA, but the case study is conducted within one of them, namely the BA Surveillance (S), which product portfolio offer solutions for land and marine systems. The organizational structure of BA S is illustrated in figure 9. Saab has very recently gone through a large organizational change, where a previous BA (Security and Defense Solutions, SDS) was removed and the BU’s connected to it were distributed over the other BAs. The reasons for the re-organization were to find new business synergies and streamline the various processes at Saab to ensure profitable growth. The new organizational structure is valid since January 2016.

![Organizational structure of BA S and BU C2S](image)

The thesis has been conducted within the BU of Combat Systems and C4I Solutions (C2S). The operations within a BU include strategy, business development, sales, product management, operation and delivery.

A re-organization to a cross-functional organization has recently been done within the BU C2S, which resulted in new roles and work routines for the divisions within the BU. The main reasons for the re-organization that took place in the beginning of 2015 were high overhead costs and frictions regarding strategy and execution in R&D projects. The goal of the new organizational structure is to align execution with the long-term product planning.

The BU C2S consists of four divisions, as can be seen in figure 9. This thesis has been conducted within the Combat System division (CS), but has also concerned the Strategy division and Business Development & Sales (BD & Sales) division. The Strategy division was introduced to manage the strategic responsibilities at this level. The main responsibility of this division is to ensure that the long-term planning for the BU C2S is executed and that it is integrated into the rest of the BU. The Strategy division is also liable for the Product Council, in which decisions regarding R&D
investments are taken. The Business Development & Sales division is responsible for sales and product knowledge for the marine sector. The CS division is located in Järfalla, Stockholm, and is structured into four departments:

- Project Management Office (PMO)
- Product
- Competence
- Customer Support

The CS division is focused on both software and hardware products specifically for marine security and defense. Due to the re-organization where the BA SDS was removed, several earlier divisions located both within BA SDS and BA S were put together and formed the CS division. Furthermore, the CS division is now the most important product unit within BU C2S. This due to the fact that the CS division contains the product of the BU with the greatest revenue, namely the 9LV system.

There are two types of projects within the CS division: product and customer projects. The product projects are managed by the Product department and aims at developing a base product from which the customer projects then can adapt for the customer’s specific needs. The customer projects are managed by the PMO department. The relation between these types of projects will be discussed in chapter 5.

4.2 Products within the CS division

The CS division is responsible for the development of four of Saab’s products. The first two products are Trackfire, which is a weapons and sensor system, and Pintelmount, which is a recoil reducer that are sold both in combination with Trackfire and separately. The third product is UTAAS, which is a sight and fire control system for tanks and combat vehicles. This product is, however, handled on the aftermarket, which is the responsibility of the Customer Support department within the CS division. The fourth and largest product is the 9LV system, which represents more than half of the revenue of the BU C2S. The 9LV system is a combat naval system that provides the customers with complete C4I, which stands for Command, Control, Communication and Combat Information Solutions. The CS division offers 9LV CMS, which is a Combat Management System that gathers data and creates a situational picture, and 9LV FCS, which is a Fire-Control System that provides naval gun support and surface defense coordination. The 9LV product is in the focus of the CS division, and therefore it has a higher priority than the other three products.

The product portfolio at the BU C2S and to which the products managed by the CS division belongs, are equalized and managed as a project portfolio. The portfolio management is divided between the Strategy division and the CS division, where the Product Council within the Strategy division takes the formal decisions and the CS division does the practical work.

4.3 Mission, vision and values of Saab

Saab provides products, services and solutions within areas of military defense and civil security to governments, authorities and corporations internationally. The business concept is to continuously develop, adapt and improve the technology to meet the dynamic customer needs.

The vision of Saab is ‘It’s a human right to feel safe’ (Saab AB, 2014), which the company realizes by developing systems and solutions that increase the security within the society to keep people safe. The mission of the company is ‘To make people safe by pushing mental and technological boundaries’ (Saab AB, 2014). The mission describes how the vision is achieved, which is done by improving,
updating and innovate technological solutions, and by contributing with the insights regarding threats to the security and how these change.

Saab has three core values: trust, expertise and drive. Trust involves keeping promises and being an honest and reliable company. Expertise is about combining knowledge with skills and continuous learning while drive concerns being passionate about innovation and being a fast and flexible organization.

Saab's business strategy has four prioritized areas since 2010, illustrated in figure 10. These areas concern the people, profitable growth, performance and portfolio. Saab is focusing on developing the employees by promoting a culture that engages the employees and their achievements, and thereby contributing to the company's growth and efficiency. Profitable growth is achieved both by maintaining the presence in key markets, which is done by continuing to invest in sustainable relationships with the customers and by focusing on product areas where there is strong potential. Within Performance, Saab aims to streamline the organization and the activities in order to be cost-efficient and provide the customers with high performance solutions. Finally, Saab aims to focus on innovations within its products and strategic acquisitions that can enhance the competitive advantage and the growth of the company.

4.4 The naval market
Saab operates in several different competitive markets, where the naval market is one of them. The main product within the naval market is the 9LV system. The home markets of the 9LV product are Sweden and Australia and it is a conservative and stable market with low-growth, which is an advantage when developing complex solutions. Due to the nature of the market and products, Saab's contracts usually extend over several years.

Within the naval market, there are a number of international rivals. However, the competition on the domestic market is very limited and the focus is rather on building and maintaining sustainable long-term relationships with the clients. The market for the 9LV system is made up of two different branches: production and restoration of the ships. The export market is constituted of more than half of the 9LV business operations and even though the 9LV product does not have the largest market shares, there is a will of continuous investment in the product in order to maintain its market position.
5. Empirical findings and analysis

This chapter will explain in detail the empirical findings from the empirical data collection of the strategy implementation in the product development process at Saab. Three main tracks for this process have been identified: strategy implementation through the organizational structure, through the customer projects and through the portfolio management and are presented in said order, together with commitment at the end.

The alignment of the product development at the case company are affected by three identified tracks: (1) through organizational structure, (2) customer projects, and (3) portfolio management. Each of these three tracks will be accounted for in this chapter. Figure 11 illustrates these tracks in the organizational structure, where the first track is red, the second blue and the third green. The first track, strategy implementation through the organizational structure, contains the strategy breakdown through the line organization and how this affects the product development process. The second track, the strategy implementation through the customer projects, illustrates the affect the initiation of and development done in the customer projects have on the product development. Finally, the third track, the strategy implementation through portfolio management, shows how the selection and prioritization affect the product development.

![Figure 11: The three tracks of strategy implementation](image)

5.1 Strategy implementation through the organizational structure

In this section, the findings regarding the Balance Scorecard and the Strategy map will be presented. These processes are used within Saab to break down and implement the strategy within the organization. The current state of these processes and any issues that inhibit the future state will be discussed in detail.

5.1.1 The Balanced Scorecard

The BSC is continuously used throughout Saab in order to reach set strategic goals, such as ‘profitable growth’, at the different levels within the organization. The BSC is considered to be a good tool, however, some areas of improvements do exist. Initially, the BSC is produced at the CEO
level and is then forwarded to each BA, then from the BA to the BU and finally from the BU to the divisions. The BSC is set and then iterated between the levels within the BA, ensuring that the goals are realistic and achievable. For instance, the BA S creates a BSC, which is then forwarded to the BU C2S. When the BU C2S receives the BSC, it is up to the management team of the BU to collectively formulate goals, both for the short- and long-term, so that the goals in the received BSC can be reached. To reach these goals, the BU C2S formulates specific goals for each of the divisions within the BU, which are then iterated for the same reasons as previously mentioned.

Creation of the BSC
At the CS division, the management team participates in the creation of the BSC through an iterative process until a BSC is created. The Strategy division within the BU C2S is responsible for being the driving force of the iterative process of the BSC within the BU, and thereby ensuring that the set goals can be fulfilled. When creating a BSC at the BU C2S level, it is broken down into goals for the departments within this division. Thereafter, a BSC is created at the CS level and after the goals have been set, Individual Performance Management dialogues are held with the employees in each department four times per year. The dialogues are held to ensure that the goals set for the division are clearly communicated to the employees who collectively need to execute these goals. However, one manager at the CS division is currently not satisfied with the BSC created at the CS division level. This is due to the reason that most of the goals within the BSC are functional rather than being cross-functional. In the future, it is desired to create a BSC with cross-functional goals instead. The person argues that,

‘For the division to function as an entirety, I hope that we can find a way to become better at cross-functional goals in the future’.

Updating the BSC
Every division has a monthly report and in which each division reports the fulfillment of the goals of their BSC. However, if any changes occur during the year, the BSC is not updated at the CS division level, but this might change in the future. If needed, relevant questions and issues are considered and managed along the way during the year. At the CS division, it is deemed that if the BSC is changed, the initial conditions are changed as well, and the division prefers to keep the initial conditions stable. However, the economic conditions are always assessed with the aid of different forecasts, both for the long- and the short-term.

Moreover, it was found that if any of the goals within BSC are not achieved, it is not necessarily considered to be a problem and a dialogue regarding this is held. If a goal within the BSC has not been achieved, it is seen as that something of a bigger importance has been prioritized instead. No potential improvements regarding this process were mentioned during the interviews.

Balance in the BSC
Several interviewees discussed the issue of the imbalance in the BSC. It was discovered that the financial perspective of the BSC receives more attention than the remaining perspectives and for this reason, there is currently no balance between the four perspectives of the BSC, both at the BU C2S and the CS division level. However, it was found that the prioritization of the short-term goals has been a conscious decision, due to the currently strained financial situation. As expressed by a manager at the BU C2S,

‘The re-organization we have done most recent is caused by the fact that we are not profitable enough. We within the BU need to reduce costs due to less funding. [...] With this as background we are consciously prioritizing short-term goals’.
Furthermore, a manager at the CS division believes that the purpose of the BSC is to function as a recipe for how to achieve the financial targets. The person argues that:

‘Financial goals are very important for the organization, however, they do not give any guidelines in how to achieve the financial goals’.

Additionally, the person explains that the financial perspective always stands since the goal is the goal is to earn more money. For this reason, he believes that the financial perspective should not be included in the BSC. Despite this opinion, the financial perspective is included in the BSC of the CS division and it is of a greater significance compared to the other perspectives on this organizational level as well. One manager at the BU C2S discusses this imbalance and states:

‘In the event of conflict between short-term goals in the financial quadrant and the long-term goals in the portfolio quadrant, the short-term goals have always been prioritized’.

The imbalance of the perspectives in the BSC is deemed to be an issue that needs to be solved in the future. More specifically, it is desired that in the future, a better balance within the BSC should be achieved. It is believed that this will require a lot of effort and work, but there are no concrete suggestions for how this balance can be achieved. One manager at the BU C2S discusses that it should not be the case that the financial perspectives receives more attention and is prioritized above the remaining perspectives. Instead, it is desired that there will be an equal focus on all four perspectives of the BSC. It is argued by the person that by achieving a balance within the BSC will have a positive impact on the success of the company:

‘[…] it is our ability to use the BSC in a balanced way where all four quadrants have roughly comparable weights that determines if we will become successful in the long-term’.

5.1.2 The Strategy Map

It was found during the interviews that to this point of time, the CS division has used strategy map only once. One manager at the CS division who was involved in the creation of the strategy map believes that the strategy map that was created was not sufficient and good enough. The reason for this is that it was deemed that the current strategy is well known and thus, there is no need to create a strategy map for it. During the time this thesis was conducted, the CS division was working towards a new strategy concerning the question of how to become a product organization. The division developed the mission and vision regarding the transformation towards a product organization. However, these were not officially launched during the time the thesis was conducted due to the recent re-organization and the fact that this division had just been formed. However, the manager at the CS division who was involved in the creation of the strategy map, believes that in the future, the strategy map will be a good and a very effective tool to use, especially when introducing the new strategy regarding the product organization.

5.2 Strategy implementation through the customer projects

Strategy within Saab is also implemented in the products through the various executed customer projects. The process behind the acquisition and execution of the customer projects can be described by three steps. The process starts with Business Intelligence (BI), which is used to identify and capture potential customers and is proceeded by step two, Winning Business (WB), for signing a contract for a customer project and thereafter step three, Execute Business (EB), where the customer project is carried out. The steps through which strategy is implemented within the customer projects are described in detail below, together with the issues that inhibit the future state of these processes.
5.2.1 Business Development & Sales

As previously mentioned, the BD & Sales division is responsible for the sales of the marine products. In order to do this, it is required to gather information regarding the market. Business Intelligence (BI) is a process at Saab used to collect a wide range of this kind of information, which concerns the different cases, i.e. the potential customer projects and how to win these. It also includes ‘soft’ information about key stakeholders compiled in capture plans and ‘hard’ information such as different indexes for countries gathered from statistical analyses in prospect lists. The BI information compiled by the BD & Sales division is stored in two different databases. Through the material gathered in the BI process, new potential business opportunities can be found and seized to become future customer projects and this is where the Winning Business process, which is described in detail below, is initiated.

Moreover, the gathered BI material is also used within the product development process, since it provides general information regarding the market, information concerning what products are needed and what kind of changes are required for improving the existing products. For this reason, there is contact between the Product department and the BD & Sales division.

The idea is that BI should impregnate the whole business of Saab and therefore, no explicit function with BI as its single responsibility exists. One manager at the BU C2S points out,

’In general, you can never get too much BI’.

Therefore, new BI material is appreciated from all various sources within the organization, as everyone possesses some valuable information. For this reason, there is no dedicated role or an organizational unit that works with BI only, as it rather should be a part of the business. However, there is currently no structure for acquiring new BI input from various sources. In the future, this structure needs to be developed and implemented in order to be able to organize and handle the incoming material from different parts of Saab.

It has also been found that currently, the BD & Sales division formulates own strategies regarding the marine domain. A manager within the BD & Sales division states:

’We develop the marine strategy, we participate in this and it is [Head of Strategy] who has the Strategy box [the box depicting the organizational structure] who ensures that it comes out, we do not need to do it’.

This can, in some cases, lead to incorrect customer offers. In general, there is a lack of continuous discussion regarding which cases to accept and to let go, which leads to improper prioritization of cases. This problem has also been noticed within the PMO department and in the future, PMO desires to participate in the discussion of which customer projects should be accepted to avoid this problem.

5.2.2 Market Area

Initially, the idea of the Market Area (MA) was to support the BD & Sales division with the information and contacts regarding current and prospective customers and business opportunities in different countries. However, this is not the current state. It has been found that the idea of MA is good in theory but not sufficient in practice, as the MA lack theoretical knowledge needed for bringing in new cases as potential customers. A manager within the BD & Sales division discusses this issue and states that there are exceptions to this, but a lot of cases are coming from the BI databases and that the information is subsequently sent out to MA. For this reason, the BD & Sales division is currently in charge of bringing in new cases, even though the division experiences a
bottleneck regarding the resources. Finally, this manager adds that the ability of MA to find cases is improving all the time.

5.2.3 Winning Business

The purpose of the WB process is to capture business of high quality. The process consists of five steps and is initiated when a customer is interested in Saab's products and is brought to an end by signing a contract.

Initially, preparations for the capture phase are executed in the first step of WB, WB1, by identifying the different possibilities on the market. During the WB2 stage, Saab positions itself as potential supplier to the potential customer. The decision whether to continue with the specific case or not is taken by the Business Council, which allocates financial resources if the WB process is to be continued. During WB3, a tender is planned and this step is finalized by creating a final version that is ready to be forwarded to the customer. In WB4, the potential customer receives the tender, negotiations take place and the contract is either signed or not. The fifth and final phase (WB5) of the WB process includes a formal capture close down and a contract hand-over meeting in which the EB team is informed regarding the obligations stated in the contract.

The PMO department within the CS division is formally a stakeholder in WB2-5 in order to be prepared for the next phase of business execution. However, it was found that the PMO department is currently a stakeholder within WB2-5, but only on paper and not in practice, which leads to lack of important communication and discussion. A manager within the CS division states that the department takes over responsibility when a contract is won, that is, at the WB5 stage. The person also describes that the PMO department does not participate as much as it should when it comes to the selection of customer projects. The person states that,

'This sequential partition is one of the failures in working with strategy'.

For this reason, it is desired that in the future, the PMO will be more involved within the WB process so that the department is given a chance to participate in the customer selection. As well as better prepare for the upcoming EB phase.

5.2.4 Execute Business

The process of EB applies to all customer projects at Saab and is initiated by assigning various roles for the execution of the contract. The Head of PMO is the project owner of all customer projects and has created the PMO model depicted in figure 12 for the PMO department in order to better implement strategy and ensure effective execution of customer projects. Therefore, the aim of the Head of PMO is that the PMO department will work according to this model when executing a customer project.
The rings in the PMO model depicted in figure 12 show the order of which the different decisions are taken and the effect they have when a customer project is executed. The first ring represents the Contract, that is when a contract has been signed and a customer project is ready to be executed. The meaning of this ring is to only create and deliver what has been stated in a contract. The Customer ring represents that each customer needs to be treated according to his or her specific needs and requirements. The third ring highlights the importance of the collaboration between the project owner and the project managers. A project manager needs to develop a project plan, which is represented by the fourth ring. The fifth and final ring concerns resource allocation of competences to the projects. It was found that currently, the employees are yet not fully committed to the PMO model, which results in difficulties of changing their work routines and hence, implementing strategy through this model. The practical implications of this are that the PMO model does not yet reach the desired effect. Regarding strategy implementation, the Head of PMO strives to implement it by ensuring that only what is stated in the contract is delivered, which is symbolized by the Contract ring. However, this is currently a challenge as not necessarily only those tasks that are included in the contract are executed, which has a negative effect on strategy implementation. For this reason, the Head of PMO desires better commitment to the PMO model in the future. This will be discussed further in more detail in section 5.4 ‘Commitment’.

Moreover, it was discovered that there is currently no general picture between the WB and the EB processes, which results in challenges of aligning products with strategy. This issue has been recognized by one manager within the CS division, who states:

‘We, the different stakeholders with different aspects regarding a complex problem, should more often gather around a table. This would enable the implementation of strategy’.

The lack of a general picture is believed to exist mainly due to absence of leaders who can achieve a successful collaboration of a group of people. The result is that there is no link between these two processes, which is needed for better alignment of the products with the strategy. In the future, it is desired that such a general picture will be in place, however, no specific suggestions for how this can be achieved have been identified.
5.3 Strategy implementation through portfolio management

The departments and divisions included in this chapter are the Product department and the Strategy division.

5.3.1 Product development

The largest product at the CS division is the 9LV system, whose product development process consists of five parts, illustrated in figure 13. The product development process for the 9LV system differs from the other products, since the BU C2S invest a major part of their R&D budget in this product. However, several managers have expressed the need for larger investment in the 9LV system to be even more successful.

![Figure 13: The product development process for the 9LV system](image)

The first part of the product development process is Business Intelligence, where the market is analyzed and used as an input to this process. This function is already discussed earlier in this chapter. The next three parts entail three documents; Product Roadmap, Product Plan and Product Goals, which contains detailed information regarding both the product and the market, which are created when the product development is approved of by the top management, discussed later in this chapter. The three documents communicate the strategic goals, and they are discussed every other week with the management team of the product project, as well as communicated through the intranet and presentations.

The Product Roadmap describes the evolution of the product, the planned improvements and how the product is funded, and is continuously updated every two years. This is a document that describes the product in detail and is used to plan the practical work within the product projects. In order to do this, a backlog is created from the Product Roadmap. The backlog is then translated into practical tasks within the product project. The Product Roadmap is used by the Product department to illustrate what is done with the allocated money, as well as how much progress they have done.

The Product Plan runs over five years and is continuously updated on a yearly basis in order to keep the document up-to-date. It contains an overview of the Product Roadmap, market and financial aspect of the product project. The Product Plan is the leading product document and illustrates where the product is heading.

The third document, and the fourth part of the product development process, is the Product Goals, in which the goals of the product project are described and how the dynamic market, funding and disturbances in the resources might affect them. What separates the Product Goals and the Product Roadmap is that the goals in the Product Goals concern the organization, not the product.

One issue with these three documents is that there is a degree of overlapping between them and therefore, they might not be the most efficient way of communicating the strategy. As one of the managers at the CS division pointed out,
One of the product managers at the Product department also believes that the three documents are overlapping and state that,

‘Product Goals is a document that I do not see us continuing with and it will disappear successively, since the content will be covered by the Product Plan’.

Thus, it is desired that, in the future, the documentation and communication regarding the product information be optimized to avoid complicated and overlapping documents.

5.3.2 9LV Product Project

The product development for the 9LV system is managed in the form of a project, namely the 9LV Product Project (9LVPP), which is constituted of different teams and small projects. The 9LVPP has an indefinite time horizon, i.e. it has no expressed project duration, and it is funded on a yearly basis from the R&D budget for the BU C2S. The 9LVPP is currently the only product project at the CS division and it was introduced during 2014.

Before the 9LVPP was initiated, all product development was done within the customer projects. This often resulted in double work, i.e. the same features could be developed in different customer projects independent from each other and not shared between the projects. Furthermore, by developing the product separately, it was difficult to ensure that the development was in line with, as well as communicating, the strategy. The developed features were specific for each customer project and it was not certain that these features were compatible with the rest of the product development. The earlier Product department also experienced issues with quality, since even though they imposed requirements on the customer projects regarding certain quality measures these were not met. The earlier management of the product development entailed large developing costs and were not in line with Saab’s strategic goal of working according to Lean, thus the 9LVPP was initiated.

The communication regarding the strategy within the 9LVPP is still a challenge, for instance the strategy is not explicitly communicated to the 9LVPP managers. Instead the product managers seek strategic guidance from Saab’s overall strategy for the marine domain. However, due to the lack of time, the existing strategy formulation has not been analyzed, but rather interpreted on an individual level with the aid of secondary sources. As a product manager expressed,

‘I have not myself analyzed the strategy formulation, I have not had time. I have to some extent interpreted the strategy, where we are headed and how we are going to get there’.

The interpretation of the strategy is followed by an analysis of the strengths and weaknesses of the product, resulting in changes in the three documents, Product Roadmap, Product Plan and Product Goals, discussed in the previous section.

In the 9LVPP two base products are developed, namely the 9LV CMS and the 9LV FCS, described in chapter 4. Both of the base products in the 9LVPP respectively consist of two parts: (1) the commonalities and (2) the variation points. The commonalities are always included in the product, unlike the variation points that do not always have to be included in the product. An example of a variation point is an interface to a specific type of canon, not all customers have this type of canon,
and thus the interface is not always needed. The commonalities and the variation points are both then put into a “bucket”, an Asset Repository, illustrated on the left side in figure 14.

**The relationship between the 9LVPP and the customer projects**

Even though the 9LV product is developed in the 9LVPP, there is still a fair amount of development done in the customer projects. Most of the customer projects were started before the initiation of the 9LVPP, and thus follow the old ways of project execution. Hence, the customer projects are today either ahead or in parallel with 9LVPP. One of the managers within the CS division explains that 9LVPP delivers either ‘just-in-time’ or ‘almost-in-time’, but the product project is expected to be less behind after one of the customers projects have been delivered.

The communication and collaboration between the product project and the customer projects are today very limited, which is considered to be an issue since the development done in the customer projects should be an input to the 9LVPP. When asked about the collaboration between these types of projects, one of the managers at the CS division stated,

‘Today it is relatively nonexistent, since we lack forums where product and customer projects can meet’.

It is believed that this issue exists due to the lack of a leader who can increase the cooperation and create a dialogue between these two parties. In the future, this cooperation is desired to be in place, since the customer project should deliver value into the 9LVPP for the amount of double work executed in different places to decrease. One manager within the CS division argues that:

‘We should be more like a hoover vacuum cleaner in the product project and ask [the customer projects]: Do you have something that we can use in the product so that we do not have to do it?’

Furthermore, there are currently unclear guidelines for how the customer projects can contribute to the development of 9LVPP. This might lead to that necessary features are not included and instead developed again in a later stage within a separate customer project, which leads to a waste of resources.

The desired future state is that all development is done in the 9LVPP, and that what the customer projects needs already have been developed. To reach this state, the 9LVPP and the customer projects need to be aligned regarding the existing product development, so that what is currently developed in the customer projects are compatible with what is developed in the 9LVPP and put in the Asset Repository for future customer projects to use. As one of the managers at the CS division expressed,

‘The 9LVPP should always be before the customer projects in time, so when the customer projects are initiated, the product project has already developed what they need. Our ambition is that the customer projects should never need to wait on the product project’.

The initial idea of the product project was, and the desired future state is, that the customer projects emanates from the 9LVPP, thus keeping the product project ahead of the customer projects. The purpose with the previously mentioned Asset Repository is that the customer projects will take the commonalities and variation points they need from it, and then adapt the base product to the specific customer. If the adaption itself generate something that might be useful in future customer projects, it is put in the Asset Repository. In this way the customer projects would contribute to the further development of 9LVPP. By always emanating from the Asset Repository, the structure aims to ensure that the amount of double work is minimized and that more resources are spent on the
development of the product. The relationship between the Asset Repository and the customer projects is illustrated on the right side in figure 14.

![Figure 14: The Asset Repository and its relationships](image)

It is desired that in the future, there will be a good cooperation between the customer projects and the 9LVPP. It has been suggested that this cooperation can be executed through a various types of forums where a dialogue is held between the two parties. One manager within the CS division suggests that in order to achieve success with the aid of these forums, there should be a mixture of them, such as meetings and emails. It is believed that these forums will aid the contribution to the development of the 9LVPP, and hence, accelerate it so that the product project will be less behind and the initial idea with the 9LVPP can be realized.

5.3.3 Product portfolio management

The responsibility for the product portfolio management before the re-organization was assigned to a specific portfolio function, where the Strategy division and the Market & Sales function were included. The tasks assigned to this function were strategic planning and decisions regarding the products, which the divisions then executed. This was an inefficient way of working due to lack of communication between the personnel doing the planning and the personnel doing the practical work. The portfolio and the strategy function could create a plan and prognosis for the product, which the divisions, that were to execute the plan, were not committed to. The lack of commitment and understanding of the strategy were exposed as soon as the divisions needed to prioritize between short- and long-term activities. The short-term activities always had a higher priority in these collisions, resulting in that few activities were done with the long-term competitiveness of the portfolio in mind.

In order to maintain and develop the long-term competitiveness of the portfolio, a re-organization was made, where the aim was to make the divisions more independent and to assign the responsibility for the short- and long-term decisions to the same division. The portfolio function disappeared during the re-organization and the responsibility for managing and developing the product portfolio of the BU were moved to the divisions. Currently, the division has the responsibility for managing and developing the product portfolio of the BU in both the long- and short-term perspective. However, the formal decisions concerning the product portfolio investments are the responsibility of the Product Council, and similar functions further up the organizational hierarchy.
There is, however, still a gap between those who execute and those who create the strategic plan for the products. The gap is a result of lack of communication and collaboration between these two parties and even though the gap has decreased as a result of increased communication and the re-organization, it still exists. This may have a negative effect on the alignment of strategy within the products and need to be improved in the future, in order to achieve a balanced prioritization between short- and long-term activities and a deeper understanding of the strategy. As one of the managers at the CS division expressed,

"Earlier there have been a gap between the technology developers and the Market & Sales department. Market & Sales worked on their own with investigating the market and creating a domain plan, while the people that develops the actual product were located far from them. [...] There is still a gap between them, but it is smaller since the communication is improved."

**Business Case**

When addressing the possibility of developing a new product or requiring further financial investment in an existing product, a Business Case needs to be presented to the management team at the Product Council for decision-making. A Business Case is a five-year plan for the product and contains detailed information regarding the entire system revolving around the product, e.g. the potential market, how the product is connected to other Business Cases, technical details, product plan, financial analysis, and risk analysis.

A Business Case is produced on the division level, where the Product department is responsible. However, several other parts of the BU, such as the BD & Sales division, are participating when producing a Business Case.

There is one Business Case for each product. However, one issue discussed during some of the interviews where if it is sufficient with only one Business Case for each product. For three of the products, Track Fire, UTAAS and Pintle Mount, one Business Case is enough. However, for the 9LV product, it is not sufficient with a single Business Case due to the size of the product.

One challenge existing today is choosing which ideas emerging within the 9LVPP to present in the Business Case and to act upon. One of the managers involved in the 9LVPP expressed,

"The question is how should I choose the two or three ideas out of ten that exist in this large product?"

In the future, several Business Cases for the 9LV product are desired, as it would enable the possibility to compare and decide on the possible ideas separately.

**Product Council and the decision levels**

There are several decision levels at Saab regarding product investments, and these decision levels follow the hierarchical structure of the organization. Which level that has the mandate to make decisions regarding a Business Case depends on the size of the investment the Business Case entails.

When a Business Case is complete, it is presented to the first decision level in the organizational hierarchy of Saab. In the case of the CS division, the first decision level is the Product Council. As previously mentioned, the Product Council is liable for the decision-making regarding the R&D investments in the product portfolio at the BU C2S. The Product Council is the responsibility of the Strategy division within the BU. Moreover, the Strategy division is also responsible for continuously follow up the progress of the approved Business Cases.
The Product Council only has mandate to approve Business Cases of a certain size. If the investment overruns the mandate of this level, the Business Case has to be presented to the next decision level, which is the Business Council at the Marine Domain Forum at the BAS.

However, if a Business Case regards a very large product investment, too large for the mandate of the Business Council at the Marine Domain Forum, it is forwarded throughout the organization to a function called the Strategy Board, which is responsible for taking decisions regarding these major investments. Furthermore, the Strategy board is liable for decisions regarding acquisitions and collaborations with other companies. The Strategy board is a working committee at Saab within the Group functions, consisting of various strategy managers and corporate group strategy functions. As previously mentioned, the Strategy Board is responsible for large Business Cases that require extended discussion at the corporate group level. If there is a conflict regarding a Business Case at this level, it is presented to the CEO.

5.3.4 Prioritization and termination of projects

One factor of significant influence regarding the strategy implementation, discussed during several interviews where the prioritization between the short- and long-term activities, both within the 9LVPP and between Business Cases in the product portfolio. It was found that the prioritization between projects, activities and investments were largely based on financial measures and short-term perspectives. Moreover, this is a consequence of the financial situation for the BU C2S, which is under constraint. The situation is due to the fact that there is deficiency in the financial resources, resulting in that the short-term goals are prioritized. Currently, the product department has received half of the required budget. To improve the present financial situation, the CS division is now focusing on winning new cases. As expressed by one manager at the BU C2S,

‘In case of a conflict between short-term and long-term goals, the short-term goals are always prioritized. [...] We need to do more but there is not enough investments’.

Product Portfolio Management

Within the product portfolio management, it was found that the prioritization between the short- and the long-term investments is not balanced. The urgent and short-term activities have been prioritized, which have resulted in fewer resources for the long-term activities. The imbalance between short- and long-term activities has resulted in a weaker competitiveness of the product portfolio. As expressed by one manager at the BU C2S,

‘Generally, we have not enough money in the 9LV track. [...] We have delivered more than we promised and we have invested less than we have permission to, resulting in a gradual erosion of the portfolio’.

One of the managers at the CS division also expressed concern regarding the prioritization,

‘I think that the R&D investments made are too much on software maintenance, a large part of this do not provide functional benefits for the customer. I would like that we could turn towards developing beneficial functions that we see will be needed to win future businesses’.

One example of this issue is that the recent investments in the 9LV product have been on creating and establishing a new base plate that is completely modular, rather than on functionality for the customer. However, since there was not enough money to invest in both new functionality and a stable base-plate, the base-plate was prioritized.

Two times every year there are portfolio reviews, conducted by the management team for the BU C2S. During these portfolio reviews the Business Cases within the product portfolio and the
Business Cases in the near future are compared and evaluated relative to each other. The output of this process is input to the strategy process in the spring.

Regarding the termination of activities, subprojects or projects, it is managed by the Product Council. Given that the budget holds, the Product department prepares a decision basis. However, small decisions, which are a common occurrence, are managed within the 9LVPP.

In the future, a more balanced prioritization between short- and long-term goals is desired, as well as investments in new functionality in the 9LV product.

**9LVPP**

When the 9LVPP is not allocated as much investments as is required in the Business Case, they need to prioritize between activities within the project. Two methods exist for prioritizing between activities or subprojects. The first method is called Celanese, which is a scoring model where various attributes are graded and then weighted in order to identify which subproject or attributes that are of largest importance. Even though there are several scores, the financial focus is prominent. This method has been used once and was considered to be a good model. However, due to lack of time, the method was not conducted according to the framework, and not continuously used to prioritize.

The second method is an internal tool where a group of people ranks measures that can be put into action for certain aspects. The ranking have a distinct financial focus, like the previous model. From the ranking, diagrams are formed and discussions are held. In the end, a few measures are deemed the most popular and are realized.

However, neither of the two described methods are standard practices, Celanese has been used only once and the other method is newly introduced. Prioritizing is considered to be a challenge and of major importance for the alignment of the product development to the strategy. As expressed by one manager in the 9LVPP when discussing prioritization,

*I think it is very difficult [to prioritize] myself. It often results in a qualified guessing*.

In the future, a method for prioritizing between activities within the 9LVPP is to be established, in order to achieve an improved alignment with the strategy.

**5.4 Commitment**

As previously mentioned, the implementation and commitment to the PMO model is currently not fully achieved. In general, it has showed that it is challenging to obtain the commitment of the employees to existing strategies. The underlying reason is found to be that the employees at Saab have an academic background and therefore, have a critical mind-set, which makes it challenging to achieve their commitment to both current and new strategies. For instance, if a manager introduces a strategy to the employees, the employees will continue to conduct their work according to how it was done previously. In general, there is a lack of a leaders and managers who have the ability to create commitment to the existing strategy. This creates a challenge for the current managers and leaders to reach the future state, in which the employees are committed to the PMO model.

There is a concern that when the PMO model will be introduced so that it can be implemented, the employees will not fully work according to the new model due to the lack of commitment. This may possibly have a negative effect on the final product. Even today, some tasks that are not stated in the contract are in some cases executed within the customer projects. Again, this is believed to exist due to the lack of commitment to the current strategy. This might lead to increased costs, time delay and
deviation from the strategy alignment of the product. It was found that even though the importance of creating commitment is understood, there are challenges within creating commitment to the strategy. As one of the managers at the CS division states,

‘All strategies are worthless if you do not feel committed’.

For this reason, it is desired that in the future, the PMO model will be implemented and that the employees will be committed to it. However, it is believed that it will take years to achieve this and currently, no specific approaches for how this can be achieved are established.

Secondly, a lack of commitment to the strategy at the BD & Sales division has been discovered. This concerns the fact that on the sales level, the salesmen formulate offers to the customers. This is due to the fact that this is how it was done before, since at that time, all customer offers were unique. For this reason, it is believed that the current customer projects are not fully aligned with the strategy to the level the company aims at. One underlying reason for this is that is lack of a stakeholder who has the ability to rearrange the existing structure and establish a commitment to the strategy. In the future, it is desired that the salesmen will be committed to the strategy so that the correct offers can be made to future customers.
6. Discussion

In this chapter the research question will be discussed with the theoretical framework and the findings of the study as the foundation. The discussion is divided into three tracks associated with the strategy implementation in the product development: Balance Scorecard, Customer projects and Product management. In each track the empirical findings is discussed and compared with the theoretical framework.

6.1 Organizational structure

In this section, the Balanced Scorecard and the Customer projects will be discussed, with the literature and the empirical findings as a foundation. We will discuss how well Saab fulfills the BSC taxonomy, the usage of the strategy map and various aspects of the customer projects.

6.1.1. The Balanced Scorecard

The application of the BSC methodology at Saab will be discussed with the foundation of the five-level taxonomy developed by Soderberg et al. (2011).

Level 1: Measures are derived from strategy

The cascading of the strategy through the hierarchical organization of Saab is in line with both the aim of the BSC and the Top-Down approach of the strategic alignment through the organizational levels discussed by Hill and Jones (2001). The overall strategy is broken down at three stages, and at each stage, translated into more tangible formulations. This implies that corporate communication regarding strategy implementation is established, which according to the literature, is a key factor for successful strategy implementation (Stein, 2004; Peng and Littlejohn, 2001).

The iterative process during the creation of the BSC at these levels implies that the formulated goals and measures of the BSC are chosen with consideration and therefore, are realistic to achieve. The iterative process also creates a dialogue regarding the strategy breakdown, which implies that the employees reflect on strategy formulation and how it can be translated properly into sufficient goals and measures. The iterative process is also in line with what it suggested by the literature, which stresses on the importance of a vertical dialogue through which organizational strategic consensus is established (Schnaap, 2012). For this reason, we deem that the iterative process and the communication associated with it, has a positive effect on the collective contribution to strategy realization and gained understanding and commitment to the strategy. Additionally, we believe that the involvement of the employees in the process of creation of the BSC has a positive impact on their commitment, which is supported by the literature (Radomska, 2012; Hrebiniak, 2006; Giles, 1992; Alexander, 1985).

The BSC created at the CS division contains specific and tangible goals, which are linked to individual performance of the employees. This is required to be in place so that the individual efforts can be linked to the collective team goals (Kaplan and Norton, 1996a). The members within the management team of the CS division each have a number of goals dedicated to them. In this way, it is clear for each manager what is needed to be achieved during the year, until a new BSC is to be produced. Additionally, we also believe that the fact that the management team itself created the current BSC for the division is beneficial. This is due to the fact that this makes the management team both fully aware of each goal and its meaning and implications, both on a detailed and a general level. This also makes them more committed to the content of the BSC since it was not
simply assigned to them. We deem that all this has a positive impact on the Individual Performance Management dialogues held by the members of the management team with their subordinates.

Our assessment is that the Individual Performance Management dialogues are of a great importance and have a positive impact on the communication needed for overcoming the obstacles of strategy implementation. The reason for this is that these dialogues are accountable for ensuring that the overall strategy that has been translated into concrete goals and measurement is actually being communicated to the employees who are going to execute the practical work, i.e. implement strategy. This is in line with what is suggested by the literature, which highlights the importance of overcoming the issue of creating a link between tasks of individual employees and organizational objectives (Aaltonen and Ikävalko, 2006). Additionally, the Individual Performance Management dialogues can be seen as an internal communication plan that is directed towards the employees and, as deemed by us, communicated in a sufficient way for reaching its aim, which is highlighted in the literature (Kaplan and Norton, 2008). Additionally, we argue that the fact that the managers of the CS division have these dialogues with their employees four times each year gives a chance for both the managers and the employees to discuss any issues and assess the current situation in order to remove any potential obstacles of strategy implementation. This is in line with literature, which discusses the role of middle managers in strategy implementation through the communication with their subordinates (Arooj et al., 2012; Bartlett and Goshal, 1996).

All this implies that Saab masters the ability of cascading their overall strategy throughout the organization by applying the methodology of the BSC and translating the strategy into concrete goals and measures within the various organizational levels. Additionally, by having considered the discussion above, we argue that the BU C2S and the CS division have successfully overcome the communication and commitment obstacles linked to the strategy implementation. As a result, our assessment is that Saab fulfills Level 1 of the taxonomy.

**Level 2a: Level 1 + Balance**

The prioritization and focus on the financial perspective, both at the BU C2S and the CS division level, shows that the balance within the BSC is missing. The underlying idea of the BSC is to complement the financial perspective with the three other perspectives and they all must be balanced, i.e. no perspective should be of a greater importance than the other (Kaplan and Norton, 1996b).

However, the BU C2S and the CS division consciously prioritize the financial perspective due to the current strained financial situation. Even though it has been argued by the interviewees that this is needed to be done with the regard of the current financial situation, we can still establish that this approach does result in a conflict with the underlying ideas of the BSC methodology. Therefore, this means that even though the BSC is widely used throughout the organization and a dedicated effort is put into creation of the BSC at various organizational levels, our opinion is that the practical management of the BSC fails due to the prioritization of the financial perspective. The focus on the financial perspective implies that the goals and measures within the BSC are in an imbalance as well. For a BSC to be balanced, there needs to be a balance between the financial and non-financial measures.

Having considered all this, our assessment is that Saab does not fulfill the criteria for Level 2a. The interviewees acknowledge the issue of the imbalance and we agree with them that this needs to change in the future if the BSC is desired to reach its full potential. The possible implications of continuing prioritizing the financial perspective is that the remaining perspectives will suffer more
and more. Additionally, innovation is an important building block of Saab’s business, and this too can be affected negatively if the financial perspective is prioritized, due to the fact that innovations do require risky investments and actions.

Even though the 2a level is not reached, the remaining levels will be discussed in the same manner and what is required to reach them in the future in order to master the BSC methodology with excellence.

**Level 2b: Level 1 + Causal Linkages**

Since the current BSC of the CS division is constituted of functional rather than cross-functional goals, the effect is that there is a missing cause-and-effect relationship chain. This chain needs to be in place and cover all four perspectives if a well-constructed BSC that reaches the current and future financial performance is desired to be achieved (Kaplan and Norton, 1996a; 1996b). This missing chain implies that the strategy of the CS division has not been translated in a sufficient way, which in our opinion, can have a negative impact on strategy implementation. An absent cause-and-effect relationship means that there is no link between the goals within the different perspectives of the BSC, which we believe makes it difficult for the employees to see the general picture and link their individual efforts to the collective goals. This in turn might have a negative impact on the employees’ commitment to strategy and the practical tasks that are needed to be executed for implementing strategy.

The management of the CS division is, however, aware of this missing chain and it is desired that it will be in place in the future. We agree with this opinion and believe that this chain has all the presumptions needed to successfully be established. Firstly, only by being aware of this important fact is the first step towards creating such a chain. Secondly, the management team at the CS division is constituted of managers of different departments, which makes it easier to create such a chain as they collectively create BSC and thus, can provide the input needed to establish such a chain.

**Level 3: Level 1 + Balance & Causal linkages**

We argue that when Saab creates a balance among the four perspectives of their BSC and establishes a cause-and-effect relationship chain, the company will reach level 3 of the BSC taxonomy.

**Level 4a: Level 3 + double-loop learning**

Even though the CS division does report the fulfillment of the BSC goals in a monthly report and any upcoming issues regarding the goals of the BSC are discussed, we deem that there is currently a lack of double-loop learning due to the fact that the initial conditions of the BSC are desired to be kept stable. It is beneficial that a dialogue is held if any issues concerning the BSC are detected, since the BSC aims to promote both feedback and learning (Kaplan and Norton, 1996b). However, the fact that if a certain goal is not reached can be classified as a minor problem, does imply that the required processes of double-loop learning is non-existent. Even though it is an advantage for the feedback and learning process that a dialogue is held when a goal has not been achieved, the double-loop learning requires a more in-depth process for understanding and solving this type of issues. In order to reach level 4a in the future, we believe that any future deviations from goal achievements needs to be explored more in detail. The underlying strategic assumptions need to be questioned and modified to create new strategic opportunities (Kaplan and Norton, 1996a) to ensure future success of the achievement of the BSC goals.
Level 4b: Level 3 + compensation

It is suggested by the literature that by tying the incentives of senior management to the objectives of the BSC, their commitment to the goals will be obtained, at least for the short-term. It is not suggested to aim for this on lower organizational levels (Kaplan and Norton, 1996b). Even though it is stated that the relationship between the incentive compensation and fulfillment of BSC objectives needs to be explored in more detail, we do suggest that this is taken into consideration for reaching the level 4b of the taxonomy.

Level 5: Level 3+ compensation & double-loop learning

We argue that when Saab implements double-loop learning and ties the incentives of senior management to the objectives of the BSC, the company will reach the highest level, namely the level 5 of the BSC taxonomy and will master the BSC methodology with excellence.

Finally, our empirical findings have confirmed the difficulties of effective implementation of BSC discussed by several researches, such as Soderberg et. al. (2011), whose model is discussed in detail in this report. We contribute to the research in this field by not only verifying the challenges in BSC implementation, but also with practical examples of what these challenges constitute and how they can be overcome.

6.1.2 The strategy map

When it comes to using the strategy map as a tool to communicate the new strategy regarding the product organization, we do agree that it can be an effective tool. However, since the CS division has not used the strategy map thoroughly, we suggest that the management team does it when implementing the new strategy. The suggested approach is to include all five principles of the strategy map (Kaplan and Norton, 2004), as well as including all elements shown in the template in Appendix B. Regarding the first principle, we believe that when using the strategy map in the future, the management team needs to consider the content of the map in order to balance the short-term financial performance and the long-term revenue growth. This principle is especially important to consider due to the current short-term financial focus of the CS division. By establishing this balance properly, it can be ensured that the focus will direct towards other perspectives that are currently not receiving enough attention.

The second principle suggests that Saab needs to identify their target customers and define a clear value proposition to each segment. This is especially important when considering the current issue at the BD & Sales division and the salesmen level, i.e. the division formulates their own marine strategy and the salesmen formulate their own customer offers. The consequences of these actions can be avoided by taking into account and implementing the second principle of the strategy map. Having done this, it is important to ensure that the defined value propositions are communicated clearly to both the BD & Sales division and the salesmen in order to ensure that they know what to base their work on, which is supported by literature (Ho et. al., 2014). In this way, the correct strategies and customer offers will be in place, which we deem will improve the commitment of mentioned employees to the strategy and also ensure that the correct offers are made, which in turn has a positive impact on aligning the contracts with the strategy. However, we believe that the issue at the BD & Sales division might depend on the fact that it is not the responsibility of this division to bring in new cases. Therefore, our opinion is that in the long-term, this issue needs to be resolved and MA needs to receive the theoretical knowledge that they are currently lacking for bringing in new cases.
The third principle of the strategy map regards the importance of identifying those internal-business-processes that create and sustain value and implement the strategy. We deem that the current work within the 9LVPP is a key internal-business-process, due to the fact that the main idea of the project is in line with both creating and sustaining value and implement the current and future strategy of becoming a product organization. Therefore, we stress on the importance of continued work towards ensuring that the 9LVPP will be less behind so that it can deliver value to the future customer projects. To achieve this, we support the establishment of the various communication forums that are needed for implementing the required organizational learning and building the required relationship between the customer projects and the 9LVPP.

The fourth principle of the strategy map concerns the identification of the various key-internal-business processes that create a balance within the existing strategies. We believe that by accelerating the 9LVPP, the project will better implement the desired Lean methodology. However, in our opinion, the standardization of the 9LV product is not closely linked to innovativeness. The ability of Saab to innovate is an important part of their business and for this reason, we deem that other internal-business-processes need to be defined for better implement the innovative ideas of the employees. This aspect of innovation is also linked to the current financial perspective: for the internal-business-process with innovation focus to be in place, it is deemed that the current focus of the financial perspective can create an obstacle for this. The reason for this is that innovation often requires financial risk-taking. Therefore, our assessment is that current focus on the financial perspective needs to be decreased to avoid its constraint to the development of the innovative internal-business-processes.

The fifth and final principle concerns Saab's intangible assets and how they can create value. We deem that the most important intangible assets of the CS division are the development within the 9LVPP. The development of the 9LVPP is based on the strategic goal of becoming more Lean, and thus delivers value by lowering future production costs and amount of work in projects. Therefore, we support further development of the 9LVPP and also, encourage the acceleration of this project so that this intangible asset can deliver as much value as possible as soon as possible. Additionally, we believe that the development in the customer projects has the all the potential for becoming an intangible asset as well. However, in our opinion, it cannot currently be considered as an intangible asset due to the fact that there is no procedure for how to use the development within the customers’ projects in the 9LVPP. When processes and forums for this are implemented and used, the development of the customer projects can be seen as an intangible asset that adds value and contributes to the strategic success of Saab.

6.2 Customer Projects
In this section, the selection of the customer projects will be discussed, with the base in the literature and the empirical findings. We will also discuss the commitment to the current and future strategies and how it can be improved.

6.2.1 Selection of the customer projects
The current issue regarding the BD & Sales division accepting all incoming cases is problematic in our opinion, since some of the accepted cases do not necessarily generate enough revenue. It has been established that this is due to the current financial situation, but we believe that by accepting all cases, the resources will be spent on projects that do not deliver enough value. For this reason, we argue that by choosing the right customer projects, the resources will be spent on what delivers value. In addition, choosing the right projects can also lead to accelerated development of the 9LVPP.
(which in its turn requires implementing a forum for knowledge sharing between the customer projects and the 9LVPP) and thus, strategy will better be implemented. Therefore, we argue that the PMO department should participate in the choice of the customer projects. Currently, this department is a stakeholder in the WB 2-5 process, however, only on paper and not in practice. This department desired to be participants in the selection of the customer projects, both in order to make sure that the appropriate projects are chosen and so that the department can better prepare for the upcoming EB phase. We do agree that the BD & Sales division needs to prioritize the customer projects better, and we deem that the PMO department can help them to do so. This is supported by the literature, which states that one of the responsibilities of a PMO is to link projects to the strategy of the organization (Thiry, 2008), which is currently not done now but will be if the department will participate in the prioritization of the projects. We believe that by doing so, the right customer projects will be chosen and that the current absent general picture between the WB and EB process will be solved due to an increased amount of collaboration and communication.

With the basis in the literature, we suggest that the PMO department should take a controlling and/or serving role profile. We believe that these roles would be appropriate in this specific case due to the fact that both of these roles have the elements needed for contributing to prioritization of customer projects. The PMOs role in the identification, selection and prioritization of projects is also supported by the literature (Unger et. al. 2013; Hobbs and Aubry, 2007). By taking on a controlling role, the PMO can establish an information base containing all the information about single projects. This information can then be used for providing input for decision-making regarding the steering of the portfolio of customer projects and by doing so, the alignment of customer projects with strategy should improve (Müller et. al., 2013). We also believe that establishment of such an information base will improve the communication between the PMO department and the BD & Sales division, which would have a positive effect on the information sharing regarding potential and existing customer projects. Finally, PMOs that have the mandate of decision-making, have demonstrated better performance (Hobbs and Aubry, 2008).

The serving role has the element of being responsible for encouraging organizational learning (Unger et. al., 2011), which we deem is required for establishing a better collaboration between the customer projects and the 9LVPP. Additionally, organizational learning has shown to be linked to innovation (Müller et. al., 2013). Therefore, we argue that organizational learning will not only improve the cooperation between the customer projects and the 9LVPP, but it will also enhance the innovativeness needed for the business.

With the basis in our findings, we can establish that there are some challenges when implementing organizational learning. Obstacles for organizational learning have been discussed, such as high costs, lack of dedication and lack of people working directly with organizational learning (Müller et. al., 2013). In our case, it too was found that the absence of organizational learning mainly depends on the lack of a leader who can establish forums for such an organizational learning. However, it is realized by the CS division that such a leader is needed, and we believe that this is the first step towards a change. With the support from the literature, we deem that the leader who will be responsible for creating and implementing this type of forums takes into account ‘the driver of rules’, the third most important driver of a successful leader (Sabourin, 2015). We argue that this driver can aid to identify and implement the necessary rules and principles for these forums to fulfill their function. The risk of not identifying any such rules or principles is that the forums will not be utilized to their full potential, which would have a negative impact on the organizational learning.
The PMO department can establish organizational learning by conducting project reviews and establishing and managing a database and archives of what has been learned (Hobbs and Aubry, 2007). However, we deem that it is important to ensure that these forums for organizational learning, when implemented, are being used and most importantly, used in a correct way to ensure effective and efficient information sharing. The theoretical contribution from our empirical findings regarding the organizational learning is that internal communication has showed to be an important building block for achieving organizational learning. The theories presented in the ‘Theoretical Framework’ discuss the absence of employees who work with organizational learning, the issues of proper documentation and high costs associated with organizational learning, and do not consider the importance of the aspect of the communication in this aspect.

6.2.2 Commitment to the PMO model

It has been established that the employees lack commitment both to the current strategy and due to their critical mind-set, it is believed that it will be difficult to establish their commitment when introducing the PMO model. The critical mind-set is believed to depend on the academic background of the employees. Having discussed the implications of the lack of commitment in the previous chapter, we argue that it is of a great importance that the managers and the leaders strive for achieving the employee commitment.

We believe that the driver of emotions can aid to overcome the critical mind-set of the employees. As Sabourin (2015) discusses, this is the most crucial driver of a successful manager. By striving for achieving commitment through conviction rather than enforcement, we deem that the employees will themselves, individually or in a group, analyze and understand the benefits of a certain strategy. By doing so, they will also realize why and how some certain tasks need to be executed and the linkage between the execution of tasks and strategy implementation. We also deem that if the managers and leaders engage the employees in discussions regarding this, as suggested by Sabourin (2015), they will develop a general understanding of the implications of the new model or strategy. It is deemed that such a discussion will have a positive impact on the critical mind-sets of the employees, as they will in this way be given the possibility to share their thoughts and opinion with like-minded.

Furthermore, we deem that for the employees to feel commitment, they need to have a relationship to the processes related to it. This is also supported by the literature, which suggests that the employees need to own processes and actions that are linked to strategy implementation (Hrebiniak, 2008). Also, those employees who are close linked to strategy execution should participate in the strategy planning and formulation processes (Radomaska, 2012; Hrebiniak, 2006). With the support in the literature, we deem that the employees should be more involved in the implementation process of the PMO model. We deem that the ‘driver of initiatives’ can be used to create various responsibilities to the employees, which would lead to initiative taking and therefore, establish commitment by involving them. We argue that if the employees with the critical mind-set are not involved in the implementation of the PMO model, they will perceive the model as something that is enforced, which will inhibit the development of their conviction. The current concerns related to the implementation of PMO model can be solved if all this is taken into consideration and put into practice.

Since the existing strategy has already been formulated and implemented and additionally, the CS division currently works towards a new strategy, we deem that commitment to the current strategy can be achieved through the ‘driver of emotions’. By doings so, the managers and leaders can make the employees develop conviction for why an alternative way of executing a task is better than the
current. We argue that this can solve the current problem of executing tasks within customer projects that are not stated in the contracts and a better alignment of the employees work with the strategy. In this way, the customer projects can focus on develop on what is needed to be developed, which would influence the cost, time and alignment of the project to strategy in a positive way.

6.3 Strategy implementation through the portfolio management
In this section, the portfolio management and the 9LVPP will be discussed, with the literature and our findings as a foundation.

6.3.1 Portfolio structuring
The model used to manage the portfolio are executed by the Product department and the Product Council at the Strategy division, thus the tasks are somewhat divided. This aspect, the collected or not collected portfolio management is not covered in the literature. The practical work of developing the portfolio is the responsibility of the Product department, while the Product Council takes the formal decisions regarding the actual investments in the portfolio. A prerequisite for this structure to work is a good communication between the Product department and the Product Council to ensure a correct selection of projects. With the support from our findings, our opinion is that the communication between the Product council and the Product department is well functioning.

Before the re-organization, the first dimension of the portfolio structuring suggested by Meskendahl (2010), the consistency, was good at the portfolio function, however, there was a gap between the portfolio function and the project level. The individuals that realized the plans and goals set by the portfolio function did not understand them and therefore were not committed to them, which resulted in that they prioritized short-term goals instead of the long-term goals. After the re-organization, the responsibility of both the strategic planning and the portfolio was moved to the division level, thus resulting in the new portfolio management structure. We deem that the consistency of the portfolio with the overall strategy is as good as it was before, or even improved, since the development of the portfolio is now done close to the individuals that develops the actual product. However, it might be more difficult to establish and maintain the link to the overall strategy, since the portfolio is situated farther down the organizational structure. Hrebinia (2006) points out that strategy is implemented by a greater amount of people than what is required to formulate it, which challenges both the vertical and horizontal communication. Thus, we have argued that it is eminent that the communication and the strategy implementation process are of high quality to maintain the link to the overall strategy. However, the communication is not something that is currently discussed in the portfolio literature, which can be considered a deficiency, since our case study has proven it an important success factor for strategy implementation.

Currently, the formal decisions regarding the investments in the portfolio are still decided at the former portfolio level, i.e. at the Product Council, or at similar functions further up the organizational structure. This implies that an integration of the portfolio exists, which is in line with the third dimension of the portfolio structuring, suggested by Meskendahl (2010). Both the consistency and the integration of the portfolio are deemed to be sufficiently in line with the literature. Our opinion is therefore that the BU C2S and the CS division should focus on improving the formalization and diligence of the portfolio, as these have been seen lacking.

The portfolio management at the BU C2S and the CS division is in line with the literature (Meskendahl, 2010; Cooper, 2001; 1999), and face the most common challenges mentioned in
literature when implementing strategy. The study has therefore confirmed the use of portfolio management within a project-based organization, and the most common challenges that appear during strategy implementation in said organization type.

**Prioritization**

The financial focus impregnates the entire BU C2S and CS division. The models and methods used for portfolio management are mainly based on financial measures, both in the Product Council and within the projects, which has been shown in literature is the most commonly used model (Jugend and da Silva, 2014; Cooper et. al., 2001; 1999). Cooper et. al. (2001; 1999) stress that a singular focus on the financial measures yields the poorest performance result. Jugend and da Silva (2014) state that this might be because more innovative and high-risk projects are discouraged, which is applicable on the BU C2S and CS division, where radical innovations or high-risk projects are a rare occurrence. With this in mind, we suggest that the financial model should be combined with an additional dimension that has a strategic approach, since Cooper et. al. (2001; 1999) found that the most successful portfolio selection techniques entail selecting projects with the strategic alignment as a foundation.

The pressing financial situation at the CS division, or really the entire BU C2S, is deemed a contributing factor of the large financial focus when selecting and prioritizing activities, innovations and projects. This is linked to the bottom-up approach of strategic alignment discussed by Steyn (2004). Due to the situation, the R&D budget is smaller than what is required for the development of the 9LV product, which means that the BU C2S and the CS division face a challenge concerning what to invest in. The BU C2S and CS division have tackled this challenge by mainly focusing on short-term goals, thus they have not prioritized long-term goals. The investments in the 9LV product have been low for several years, however, they have still delivered more than expected. None of these earnings have been reinvested into the development of the product itself, and thus the maintenance of the product has fallen behind and the portfolio has been gradually eroded and the competitiveness has decreased. One of the managers at the CS division expressed that too much of the investments focused on the maintenance of the 9LV product and not on new functionality. However, given that the maintenance of the 9LV product has been lacking for several years, these investments are needed if the product is to remain competitive. For this reason we suggest that investments should focus of both maintenance and new functionality.

Regarding the fourth dimension of the portfolio structuring suggested by Meskendahl (2010), the diligence of the portfolio is low, since the decisions taken regarding the portfolio are not balanced between the short-term and the long-term goals. The activities and projects are mainly of a short-term character. This implies that the strategic approach when selecting and prioritizing does not have as large of an impact as the financial measures. To achieve a higher diligence, the mix between the short-term and long-term activities has to be improved, thus selecting and prioritizing based on the long-term goals as much as the short-term.

The prioritization within the portfolio is an eminent challenge for the CS division, as they lack a sufficient model for prioritization and selection of activities and projects. Due to the fact that the CS division has not been allocated as much resources that they needed, they have to prioritize. Furthermore, since there is only one large Business Case for the entire 9LV product, they will have to prioritize which ideas and innovations they are going to present to the Product Council. Thus, this task falls on the CS division, and more specifically the Product department. Since a model for this selection is absent in practice, there is no way to ensure that the choices made are in line with strategy or that explicit and objective criteria is used. This implies that the formalization of the
portfolio is low, which is the second dimension of portfolio structuring, suggested by Meskendahl (2010). Even though, as Dietrich and Lehtonen (2005) point out, a high degree of formalization does not fit all organizations, we deem the portfolio management would benefit from a more formalized structure regarding the selection and prioritization. A higher degree of formalization fit better with the decision-making style of the BU C2S and the CS division, where well-grounded cases are the foundation of decisions. However, two models have been discussed during the study, the Celanese model that have been used only once and a second model that have not been used yet at all. Both these models are scoring models, aim at ranking different actions against each other. Scoring models yield, according to literature (Jugend and da Silva, 2014; Cooper et al., 2001; 1999), a portfolio with high-value projects. The Celanese method was used only once, and the framework was not properly followed. The amount of effort put into the method is questionably little, partially due to lack of time, which may have resulted in nonsufficient prioritization. No continuous follow-up was done, which implies that no evaluation of the conducted prioritization has been done. The managers are well aware of this, and have learned a new model for this prioritization, which build on a somewhat similar concept as the Celanese model. Our opinion is that which of the scoring models they choose to use for the prioritization does not matter. What is important is that they choose and commit to one of them, thus enabling them to compare and prioritize activities and projects in a standardized way, which is supported by the literature that highlights the importance of formalization (Meskendahl, 2010).

Furthermore, managers at the Product department have also expressed that it is very difficult to choose which ideas to realize, that the selection process usually ends up in a qualified guessing. To guess which ideas or innovations to invest in is not in the best interest of the strategic alignment of the portfolio, since by guessing they do not actively select projects or activities, but rather let the projects or activities be determined by chance.

**Business Cases**

One way to improve the uncertainty and establish a connection to the strategy is to not have a single Business Case for the 9LV product. Since the product is very large, it might be more appropriate to have several Business Cases for the 9LV product. As a suggestion, there could be one Business Case for each idea or innovation, then the Product Council can aid the Product department in the selection of ideas and innovations. By approving investments for one idea or innovation at a time, it opens up the possibility of comparing and evaluating them. This enables a selection where the financial focus is less prominent and a strategic approach can gain a greater focus, which according to Cooper et. al. (2001; 1999), increases the success of the portfolio. The splitting of the single Business Case should be combined with a more strategic approach, such as strategic buckets. By sorting investments into different “bucket” they can reserve some of the investments for innovation, and some for maintenance. In this way, the financial focus becomes less prominent compared to the strategy, thus the selection process becomes more in line with the successful portfolio management, described in the literature (Cooper, 2001; 1999).

**6.3.2 Decision-making**

The decision-making at the BU C2S and the CS division is based on the Business Cases, which are very detailed and contain all information regarding the financial and strategic aspects of the products. The creation of the Business Cases requires that various departments other than the CS division participate and share information, suggesting a cross-functional collaboration, which is encouraged by an evidence-based decision-making style. This collaboration need to work seamlessly, since the Business Cases are used to develop the portfolio and thus, correct information
is essential. Due to the currently extensive Business Cases, our assessment is that the Product Council has as good of an understanding as they can get of the product when deciding on Business Cases. This implies that the BU C2S and CS division have an embedded portfolio mindset, which according to the first organizational objective described by Kester et. al. (2014; 2011), is important if they are to achieve the strategic fit of the portfolio. The second of Kester et. al.’s (2014; 2011) organizational objectives, the focused effect, is however something that the BU C2S and the CS division need to improve, as discussed previously.

The CS division has not achieved a high degree of agility regarding the decision-making. However, our study suggests that the third of the organizational objectives suggested by Kester et. al. (2011; 2014), the decision-making agility, is of less importance for the CS division, due to the nature of the market in which the company operates. The market of Saab is moving at a slow pace and the time it takes to prepare, win and execute a contract extends over several years. Obviously, the organizational agility has an influence on the effectiveness of the decision-making and success of the company, but our assessment is that this objective is not as important as the other two objectives suggested by Kester et. al. (2011; 2014), thus the agility may be of various importance for organizations in different markets. The less agile decision-making of the division and BU is the result of the time it takes to prepare and approve the Business Cases, since this is an extensive procedure that requires time. This is in line with what Kester et. al. (2011) state characterizes evidence-based decision-making.

The strong portfolio mindset, extensive Business Cases and the low decision-making agility implies that the decisions taken within the BU C2S is evidence-based, thus rely heavily on well-grounded empirical evidence and objective information (Kester et. al., 2011). The fact that radical innovations are not prioritized to a large extent in the portfolio at the BU C2S is therefore not that odd, since it is difficult to produce as well-grounded evidence and connection to strategy as for incremental innovations.

According to Kester et. al. (2011), the evidence-based decision-making style leads to increased strategic fit of the portfolio. To ensure strategic fit, portfolio reviews are done at regular intervals, where the Business Cases in the portfolio are evaluated and compared. A termination of a Business Case as a result of these reviews, however, is a very rare occurrence and they do not have a process to terminate these Business Cases. They do have a process for terminating new innovations, consisting of small milestones and evaluations, which ensure the alignment to strategy and financial sustainment. If the Business Case for the 9LV product would be divided into several smaller Business Cases, then a proper process for the termination of activities and project should be established. However, currently there are other challenges that are of a larger importance.

6.3.3 Portfolio success

Having considered the structuring of the portfolio in the previous section, the success of mentioned portfolio management will now be discussed.

The portfolio method used at the BU C2S and CS division has similarities with more than one of the clusters defined by Cooper (1999). Before the re-organization, there was a gap between the strategy formulation and implementation, as previously discussed. This gap indicates that management at the execution level did not understand the portfolio method used to formulate the strategy, resulting in that prioritization at the division did not match the strategic plan. Management at the execution level was not involved in the formulation stage, thus they could not relate to it. Moreover, management did not like the portfolio method and were therefore not committed to it. There was a
lack of enthusiasm for the portfolio method by management, indicating a poor management fit of the earlier portfolio method, which shows similarities with both the Duds and the Crossroads businesses clusters. As previously mentioned, our study has shown that the communication between the individuals working with the development within the projects and the individuals managing the portfolio is of great importance, which is a dimension not covered sufficiently by the literature.

After the re-organization, the portfolio management has been relocated to the divisions, thus increasing the integration between strategy formulation and implementation. There is still a gap regarding the strategic planning and the execution at the CS division. However, the gap has grown smaller, since the communication between these two parties has increased. The fact that the current responsibilities regarding the product are still very new, we expect this gap will grow even smaller in time, and thus, improving the alignment with strategy. Our apprehension is that the portfolio method is better understood by management now than before the re-organization. However, there are still room for improvements, especially regarding the prioritization of the activities and projects, thus they still show similarities with the Duds and the Crossroads businesses clusters regarding these aspects.

Overall, we deem that the portfolio method fits the management decision-making style sufficiently. This due to the fact that they are a company that bases their decisions on well-based Business Cases, as previously discussed, and the portfolio method has been created with this in mind.

We deem the portfolio method chosen for the BU C2S and the CS division is overall a realistic and well-functioning method that is truly used at the division, similar to both the Crossroads businesses cluster and the Benchmarks cluster. However, since a method for prioritizing and selecting which ideas and innovations that is to be included in the Business Case is lacking, it is not completely clear or user friendly. Thus, the strategic alignment might also be difficult to achieve, which is connected to both the third and fourth dimensions of Meskendahl’s (2010) portfolio success, strategic fit and balance of the portfolio.

Our apprehension is that the BU C2S and the CS division are in the Crossroads businesses cluster, but to be able to determine this with certainty, a more extensive investigation has to be done. What can be seen, however, is that they do not belong to the Benchmarks cluster, which Cooper et. al. (1999) argues that every company should strive for. Thus, there is room for improvement, especially regarding the prioritization between short-term and long-term goals, and complementing the financial selection technique with a strategic one.

Additionally, Meskendahl (2010) discusses the average single project success, the first dimension in the portfolio success, which is not a sufficient condition on its own. For the BU C2S and the CS division, this implies that they cannot only focus on making the 9LVPP successful, they also have to focus on choosing the right projects, balance in the portfolio etc. if they are to be successful.

6.3.4 Is 9LVPP really a project?

The 9LVPP is by the BU C2S and the CS division regarded as a project. However, our assessment is that the 9LVPP is not a project by definition. A partial reason for this is that it does not have a defined time horizon, compared with projects that are defined as ‘a temporary endeavor’ (Turner, 2008, p. 5) and have a fixed duration. The 9LVPP share more similarities with a programme than a project, more specifically a goal-oriented programme. A goal-oriented programme is used to translate business strategies into tangible actions, building on existing structures (Pellegrinelli, 1997). This is in line with the 9LVPP, which was initiated for the purpose of implementing the new
strategy regarding working according to lean and striving for being on the edge of technology. The time horizon of the 9LVPP is the same as for the 9LV product, i.e. the 9LVPP will exist as long as the 9LV product is part of the product portfolio or as long as it is deemed the best way of managing the product development of the 9LV product. Having considered this, our assessment is that the structure and time horizon of the 9LVPP has more in common with a goal-oriented programme than a project.

The managers of the 9LVPP define the different parts as subprojects, which indicate that the 9LVPP has projects within itself. The responsibilities or the 9LVPP management include prioritizing, planning and evaluating the different subprojects, which are in line with what the literature states a programmes responsibilities are (Lycett et. al, 2004; Pellegrinelli, 1997; Ferns, 1991). By viewing the 9LVPP as a programme instead of a project, they can benefit from the fact that a programme establishes a bridge between strategic goals and the subprojects, thus improving the implementation of the strategy.

The initiation and yearly cycle of the 9LVPP is similar to the life cycle of a programme. The development of the purpose of the 9LVPP can be compared with the formulation of a programme, which is the first phase in the programme life-cycle. During the initiation of the 9LVPP, the structure of the product project was defined, same as for the second phase, organization, in the programme life-cycle. The third phase of the programme life-cycle, deployment, the performance, benefits and prioritization of the projects within the programme are measured. This can be compared to the continuous evaluation done of the 9LVPP, where project plan are updated every year and the product roadmap is updated every other year. The funding if the 9LVPP are allocated on a yearly basis, thus the progress of the 9LVPP is evaluated every year. This is similar to the programme evaluations that occur during the fourth phase of the programme life-cycle, the appraisal. Thus, the 9LVPP has an iterative management cycle, which Thiry (2004a; 2004b; 2002) and Pellegrinelli (1997) argue characterize programme management.

Earlier research has shown that it is a common occurrence to treat programmes as large project, which is confirmed by our study. Programme and project management are not equivalent, which means that a programme cannot be managed as a large project. If the 9LVPP has more in common with a programme than a project, but is managed as a project, the CS division will face some challenges in the future. Lycett et. al. (2004) points out that by managing a programme as a large project, there will be too much control, hence diverting energy from value adding activities. Furthermore, cooperation between the subprojects might be poor due to competition over resources and failing with organizational learning, which is highly needed for the acceleration of the 9LVPP. By managing the 9LVPP as a programme rather than a project, should lead to greater success of implementing strategy.

6.3.5 9LVPP and customer projects

The 9LVPP was initiated to reduce the amount of double work and gather the product development in one place. From a strategic alignment point of view, this increases the possibility of strategic fit. This is due to the fact that it becomes easier to control and steer the development towards strategic goals when it is gathered in one place instead of spread out over several projects. The 9LVPP also creates a better overview of the product development, thus enables a more focused investments in the product. By creating a more standardized product, the production costs might decrease, thus generating more value to the division. There is, however, a risk with gathering the product development to one place and especially with standardizing the product, namely that the innovation
can be inhibited, due to a more difficult ability to change. Therefore, it is of a great importance to develop an internal-business-process, which focuses on innovation, as innovation is one of the building blocks of the business of Saab.

Currently, the connection between the 9LVPP and the customer projects does not work according to the purpose of the 9LVPP. However, this is not that odd, since the 9LVPP is newly implemented and the majority of the existing customer projects were initiated before the 9LVPP. What is important now is to integrate the development done in the customer projects into the 9LVPP, so what is developed in the customer projects is incorporated in the development of the product. Currently, the collaboration between the 9LVPP and the customer projects does not work sufficiently. There are no forums where the developers in the 9LVPP and the customer projects can meet and share their knowledge, resulting in that important features developed in the customer projects might be lost or developed anew in the 9LVPP. The gap between these projects also affects the strategic alignment of the product development, since a divided product development aggravates the communication of the strategy.

For the 9LVPP to get “ahead” of the customer projects, the collaboration between existing customer projects and the 9LVPP must improve. This is also expressed by managers at the CS division, they are aware of the issue but have not yet succeeded to establish this link. It is, however, of great importance that this link is established as soon as possible. As of today, no one is responsible for tackling this challenge, and there are unclear guidelines for how the customer projects can contribute to the 9LVPP.

Establishing this link now, and guidelines for how the integration can be done, will also be an asset in the future when the 9LVPP work as it was planned to do during the initiation. This due to the fact that the adaption of the commonalities and variation points to each specific customer, might generate features that needs to be incorporated or put in the Asset Repository, thus this link will be needed in the future.

6.3.6 Strategy implementation in 9LVPP

Within the 9LVPP, the strategy is implemented and communicated through three documents, Product Roadmap, Product Plan and Product Goals. Communication has been discussed as a vital part in the context of strategy implementation by the literature (Kaplan and Norton, 2005; Steyn, 2004; Peng and Litteljohn, 2001; Miniance and Falter, 1996), and therefore, it is of great importance that the communication within the 9LVPP works sufficiently.

The communication regarding the strategy within the 9LVPP is a challenge for the CS division. There is some overlapping between the documents, which might result in that they are not used in an optimal way. The documents need to communicate clear and specific target goals, and facilitate the utilization of the information. It was also found that the strategy in not communicated to the managers within the 9LVPP, which indicates that the documents do not communicate the strategic goals sufficiently and that the documents are not used properly. By interpreting the strategy individually, it cannot be assured that the decisions made contribute to the strategic goals. A suggestion is, and as some managers have pointed out, to replace the three documents with one single document. Currently, the three documents contain a great amount of information, and if the documents overlap, it result in heavy reading. This aggravates the reading and understanding of the document. As Aaktenon and Ikävalko (2002) point out, ‘A great amount of information does not guarantee understanding’. Having considered this, the documents need to be overlooked so that they communicate the strategic goals clearly and are used properly.
7. Conclusions

This chapter will present the answers to the research questions, thus the conclusions of this study. The research questions will be presented in the presented order. The main findings, deemed by us having the greatest implications, will be presented. The chapter will end with the empirical contribution.

7.1 How is product development aligned with strategy in a project-based organization?

The study has shown that in a project-based organization, the product development can be aligned with strategy through three different tracks:

- through the organizational structure
- through the external projects
- through the portfolio management

Each track will be discussed below.

7.1.1 Strategy implementation through the organizational structure

This study showed that the BSC methodology is implemented in a project-based organization with the aim of reaching and implementing the overall strategic goals at the different levels within the organization. For instance, it has been shown that the BSC is initially produced at the CEO level and then forwarded to BA, then to BU and finally to the divisions. To ensure that the goals within the BSC at these organizational levels are realistic and achievable, the BSC is set and then iterated at these levels. The goals formulated in the BSC considered both the short- and the long-term perspective. In order to ensure that these goals can be reached, more specific goals were formulated for each division of the BU. When the BSC reaches the final level, that is the division, a new BSC was created, this time with goals for the departments within the division. These goals were communicated to the employees through special dialogues. The purpose of these dialogues was to communicate what is needed to be executed practically on an individual level in order to collectively implement strategy. The fulfillment of the BSC goals was reported on a regular basis.

Additionally, the study showed that in a project-based organization, the strategy map can be used as a tool for visual communication of how a strategy can be achieved.

7.1.2 Strategy implementation through the external projects

The case study showed that strategy could also be implemented in a project-based organization through the execution of external projects. The process of executing external projects is constituted of three phases. The first phase, the BI, is used for gathering information regarding the market, the potential customers and how to capture these. The BI information consisted both of soft and hard data. There was no dedicated role for this process, however, a division worked partly with this task. It was also shown that an organizational function existed and its theoretical aim was to provide the information regarding the business opportunities.

The second phase, the WB, consisted of five steps and was initiated with preparations for the capture phase, followed with signing a contract for an external project and finished with a contract hand-over meeting before initializing the third and last phase, the EB, during which the projects were executed. The external projects were owned by the PMO, more specifically by the Head of this department.
7.1.3 Strategy implementation through the portfolio management
The study has shown that the implementation of strategy in a project-based organization involves portfolio management. The portfolio management is divided between the BU and the divisions, where the divisions do the practical work of developing the portfolio and the BU takes the formal decisions. The strategy was implemented at the portfolio level through the selection, prioritization and termination of projects. The product development was managed in a large project, consisting of subprojects, located at the department level. The strategy was implemented and communicated through documents that were available for all participants in the product development. The division was responsible for the short-term and long-term strategic planning and for prioritizing within the portfolio. The division also forwarded business cases regarding changes in the portfolio and funding to a committee at the BU level, where the selection and termination of projects where executed. Large business cases where forwarded further up in the organizational hierarchy, in order to anchor the decisions further. The termination of small activities within the projects where done at the project level. For prioritizing and selection criteria, financial models and, to some degree, scoring models where used.

How can challenges associated with strategy implementation be overcome in order to reach effective strategy implementation within product development?

7.2 How can challenges associated with strategy implementation be overcome in order to reach effective strategy implementation within product development?
The main challenges associated with strategy implementation identified in the study will be presented within the tracks stated in the previous section.

7.2.1 Strategy implementation through the organizational structure
One main challenge for strategy implementation through the organizational structure in a project-based organization was identified in the study:

• **Achieving balance in the Balanced Scorecard**
The study shown that one major challenge when implementing strategy through the organizational structure with the aid of the BSC methodology is achieving balance between the four perspectives of the BSC. The main implications of this issue are that the BSC cannot achieve its full potential, which means that the strategy cannot be implemented successfully. For a BSC to be balanced and reach its full potential, all four perspectives must be of equal importance. The balance can be achieved in three ways: each perspective needs to have an equal amount of measures, there needs to be a balance between the outcome measures and the performance drivers and finally, there needs to be a balance between the financial and non-financial measures.

7.2.2 Strategy implementation through the external projects
One main challenge for strategy implementation through the external projects in a project-based organization was identified in the study:

• **The prioritization of the external projects**
The study has shown that one major challenge when implementing strategy through the external projects is the absence of the prioritization of these projects. The main implications of this are that the organizational resources will be spent on those projects that do not generate enough revenue and additionally, do not contribute to the implementation of the strategy. For this reason, it needs to be ensured that the prioritization of the external
projects is put into practice. This can be achieved by the participation of an organizational function, such as the PMO department as suggested by the literature, which can, for instance, establish information base necessary for the prioritization of projects.

7.2.3 Strategy implementation through the portfolio management

Two main challenges for strategy implementation through the portfolio management in a project-based organization were identified in the study:

- **The prioritization and selection of projects**
  The study has shown that one major challenge when implementing strategy through the project portfolio is the prioritization and selection of projects, which is also expressed in literature connected to portfolio management. To achieve a good strategy implementation, the projects should be selected with the strategic alignment as the foundation, complemented with financial- and/or scoring models. When selecting and prioritizing, the balance between short-term and long-term activities is important. The implication of not having a well-functioning selection and prioritization of projects is a poor strategic alignment, thus the projects do not contribute to the success of the organization.

- **Managing a programme as a programme**
  A second major challenge shown in the study regarding the strategy implementation through the portfolio, was managing a programme as a programme. Programmes are mistakenly often managed as large projects in the portfolio, resulting in too much control, hence diverting energy from value adding activities, and resource competition between the projects. By not treating a programme as a large project, the programme can establish a bridge between the strategic goals and the projects within the programme, thus improving the strategy implementation.

7.3 Empirical contribution

Based on this study, the empirical contribution to the case company is to consider the following:

- A balance between the four perspectives of the BSC needs to be established
- Saab is recommended to accelerate in the BSC taxonomy
- The current issue of separate marine strategy formulation at the BD & Sales level needs to be solved
- The current issue of salesmen formulating their own customer offers needs to be solved
- Commitment to current and future strategies, when presented and during the implementation phase, needs to be established
- A forum for knowledge sharing between the customer projects and the 9LVPP needs to be implemented for acceleration of the product project
- The financial focus in the selection and prioritization of activities and projects need to be complemented with a strategic approach
- A prioritization model needs to be established within 9LVPP
- Create Business Cases for each idea/innovation within the 9LV Product instead of one BC for the entire 9LV product
- Consider the fact the 9LVPP might actually be a programme, not a project
8. Final reflections of the study

This chapter will include our final reflections on the study. The theoretical contribution of the study will be discussed, as well as the study’s relation to sustainability and proposed future research.

8.1 Theoretical contribution

The theoretical contribution of this study is, through an empirical example, an increased knowledge and insight of how project-based organizations manage the gap between the strategy formulation and the strategy implementation. In the current literature, several studies have been done within the field of strategy formulation, however, there is a lack of research within the field of strategy implementation. Several problems and challenges associated with this gap have been verified by this study and thus, an additional theoretical contribution are the proposed solutions for how these problems and obstacles can be solved.

8.2 Sustainability

According to The World Commission on Environment and Development (WCED, 1987), the concept of sustainability refers to how the future demand can be fulfilled with respect to the scarce resources and is constituted of the economical, social and environmental dimensions. In this case study, the obstacles of strategy implementation in the product development process have been identified and it has been suggested how they can be overcome. The recommendations provided in this thesis are for the purpose of better implementing the strategy in the product development. Our recommendations would accelerate the product project, and thus, ensuring less double work and promoting efficient and effective resource utilization. This together with the proposed organizational learning would have positive effects on the employees due to the facilitation of their daily work, which means better utilization of the human capital. Therefore, it can be stated that this study has contributed with recommendations, which take into consideration Saab meeting the current and future market needs with regard to all three dimensions of sustainability.

8.3 Future research

In the future research, it is suggested to closer investigate the link between the PMO and their role in strategy implementation. This is due to the fact that this has not been in focus of this study and also due to the fact that the popularity of PMOs is increasing. Secondly, to verify the conclusions of this study, it is suggested that a corresponding study is conducted in other project-based organization. By doing so, it can also be verified whether the problems and obstacles detected in this study also exist in other project-based organizations. Thirdly and finally, by conducting an extensive and corresponding study, the methodologies and procedures for strategy implementation can be benchmarked between the investigated organizations to detect which, if any, of these lead to more success than others.
References


77


Appendix A

Appendix B

Kaplan, R. S. and Norton, D. P. (2001)