

# Levers on Levels in P-form Organisations

*A Case Study about Management Control of  
Complex Projects at Saab AB*

Authors

Elena Czarnecki

Andréa Stephanou Hällöv

Advisor

Jonas Söderlund



*English title:*

*Levers on Levels in P-form Organisations – A Case Study about  
Management Control of Complex Projects at Saab AB*

*Authors:*

Elena Czarnecki and Andréa Stephanou Hällöv

*Advisor:*

Jonas Söderlund

*Publication type:*

Master's Thesis in Business Administration  
Strategy and Management in International Organisations  
Advanced level, 30 credits

Spring semester 2018

ISRN-number: LIU-IEI-FIL-A--18/02851--SE

Linköping University  
Department of Management and Engineering (IEI)  
[www.liu.se](http://www.liu.se)

## COPYRIGHT

The publishers will keep this document online on the Internet – or its possible replacement – for a period of 25 years starting from the date of publication barring exceptional circumstances.

The online availability of the document implies permanent permission for anyone to read, to download, or to print out single copies for his/hers own use and to use it unchanged for non-commercial research and educational purpose. Subsequent transfers of copyright cannot revoke this permission. All other uses of the document are conditional upon the consent of the copyright owner. The publisher has taken technical and administrative measures to assure authenticity, security and accessibility.

According to intellectual property law the author has the right to be mentioned when his/her work is accessed as described above and to be protected against infringement.

For additional information about the Linköping University Electronic Press and its procedures for publication and for assurance of document integrity, please refer to its www home page: <http://www.ep.liu.se/>.

## ABSTRACT

**Background:** Considering the flexible structure of P-form organisations and the task to execute complex projects there is a need to gain a full understanding of management control systems across all the levels of the organisation and the way the levers of control are connected to each other.

**Purpose:** To increase the understanding of the management control levers used by P-form organisations on the different organisational levels, in particular of the control linkages across the organisational levels.

**Methodology:** A single case study approach was taken, which involved multiple sources and data collection techniques, including 15 interviews and one workshop with managers from all the organisational levels of the company.

**Findings:** The findings indicate that management control systems in P-form organisations must be viewed from a multi-level perspective in order to gain a holistic understanding. Moreover, a balance of control levers must be in place on each level, as well as among the control linkages that enable the integration of management control across the organisation.

**Keywords:** Management control systems; Levers of control; Integrated management control; Control linkages; Complex products and systems; P-form organisation.

## ACKNOWLEDGEMENTS

We would like to express our appreciation to all the people that contributed in making this thesis possible, without the help and support the end result would not have been what it is today.

First, we wish to thank our thesis advisor Prof. Jonas Söderlund from the Management and Engineering Department at Linköping University for his guidance, encouragement and unlimited support of our thesis study and research. We also would like to thank our seminar group for providing us with insightful comments and valuable feedback.

Our sincere gratitude further goes to our case company Saab AB. Our contact persons Pär Jonsson and Patrik Sundin always supported us with their knowledge and expertise, and we are thankful for the time and dedication of all the employees who participated in our interviews and the workshop. Your contributions were highly valuable.

Last but not least, we want to say thank you to our fellow SMIO students for sharing this experience with us, to Arvid Nordquist for always providing us with energy, and to our friends and families for the limitless support and continuous encouragement throughout our years of studying and writing this thesis.

Thank you all!

Linköping in May 2018

Elena Czarnecki and Andréa Stephanou Hällöv

# TABLE OF CONTENT

<b>1</b>	<b>INTRODUCTION .....</b>	<b>1</b>
1.1	BACKGROUND.....	1
1.2	PROBLEM DISCUSSION AND RESEARCH QUESTION.....	3
<b>2</b>	<b>THEORETICAL FRAMEWORK.....</b>	<b>7</b>
2.1	THE P-FORM ORGANISATION.....	7
2.2	MANAGEMENT CONTROL SYSTEMS .....	9
2.2.1	<i>Management Control Systems in Project-Based Settings .....</i>	<i>10</i>
2.3	LEVERS OF CONTROL .....	11
2.3.1	<i>Belief System .....</i>	<i>12</i>
2.3.2	<i>Boundary System.....</i>	<i>13</i>
2.3.3	<i>Diagnostic Control System.....</i>	<i>13</i>
2.3.4	<i>Interactive Control System.....</i>	<i>14</i>
2.4	A TENTATIVE MODEL .....	14
2.5	INTEGRATED MANAGEMENT CONTROL.....	16
2.6	A NEW MODEL: LEVERS ON LEVELS .....	18
<b>3</b>	<b>METHODOLOGY .....</b>	<b>20</b>
3.1	SINGLE CASE RESEARCH DESIGN.....	20
3.2	RESEARCH STRATEGY.....	22
3.3	RESEARCH DATA.....	24
3.3.1	<i>Process Analysis – Process Improvement.....</i>	<i>24</i>
3.3.2	<i>Data Selection.....</i>	<i>24</i>
3.3.3	<i>Data Collection.....</i>	<i>27</i>
3.3.4	<i>Data Analysis.....</i>	<i>34</i>
3.4	RESEARCH QUALITY .....	35
3.4.1	<i>Reliability.....</i>	<i>36</i>
3.4.2	<i>Validity.....</i>	<i>36</i>
3.4.3	<i>Limitations .....</i>	<i>38</i>
<b>4</b>	<b>MANAGEMENT CONTROL AT SAAB.....</b>	<b>40</b>
4.1	INTRODUCING THE COMPANY .....	40
4.2	BRIEF HISTORY .....	41
4.2.1	<i>In the 1990s.....</i>	<i>41</i>
4.2.2	<i>Beginning of the 2000s.....</i>	<i>42</i>
4.2.3	<i>Around 2007.....</i>	<i>43</i>
4.3	SAAB TODAY.....	43
4.3.1	<i>Mission, Vision and Values.....</i>	<i>45</i>
4.3.2	<i>Strategic Business Plan, Financial Plan and Budget .....</i>	<i>46</i>
4.3.3	<i>Profit and Loss Responsibility .....</i>	<i>47</i>
4.3.4	<i>Global Management System.....</i>	<i>48</i>
4.3.5	<i>Measurement and Follow up.....</i>	<i>54</i>
<b>5</b>	<b>ANALYSIS.....</b>	<b>57</b>
5.1	LEVERS ON LEVELS .....	57
5.1.1	<i>Corporate Level .....</i>	<i>58</i>
5.1.2	<i>Business Level.....</i>	<i>61</i>
5.1.3	<i>Functional Level .....</i>	<i>63</i>
5.1.4	<i>Project Level .....</i>	<i>66</i>

5.1.5	<i>Control Linkages</i> .....	68
5.2	THE INTERPLAY OF CONTROL LEVERS .....	73
<b>6</b>	<b>CONCLUSION</b> .....	<b>76</b>
6.1	BALANCING CONTROL LINKAGES .....	76
6.2	THEORETICAL CONTRIBUTIONS.....	77
6.3	PRACTICAL CONTRIBUTIONS .....	79
6.4	LIMITATIONS AND FUTURE RESEARCH .....	80
	<b>REFERENCES</b> .....	<b>82</b>
	<b>APPENDIX A – INTERVIEW GUIDE</b> .....	<b>89</b>
	<b>APPENDIX B – WORKSHOP GUIDE</b> .....	<b>90</b>
	<b>APPENDIX C – CAQDAS NVIVO NODES</b> .....	<b>91</b>
	<b>APPENDIX D – SAAB'S ORGANISATIONAL STRUCTURE</b> .....	<b>92</b>
	<b>APPENDIX E – COMPARISON CONTRACT OWNER AND PROJECT OWNER</b> .....	<b>93</b>

## LIST OF FIGURES

Figure 1: Levers of Control.....	11
Figure 2: Simplified Version of A Tentative Model.....	15
Figure 3: Levers on Levels .....	18
Figure 4: Saab's Organisational Chart.....	26
Figure 5: Saab's Strategic Key Areas.....	40
Figure 6: Transformation of systems, regulations and tools.....	44
Figure 7: Global Management System.....	49
Figure 8: EB and MP Process .....	50
Figure 9: Levers on Levels at Saab.....	57

## LIST OF TABLES

Table 1: Characteristics of the P-form Organisation.....	8
Table 2: Interview Participants .....	26
Table 3: Workshop Participants.....	31
Table 4: Secondary Data.....	33
Table 5: Control Levers at the Corporate Level .....	61
Table 6: Control Levers at the Business Level .....	63
Table 7: Control Levers at the Functional Level .....	65
Table 8: Control Levers at the Project Level .....	68



## ABBREVIATIONS

BA	Business Area
BU	Business Unit
CAQDAS	Computer Assisted Qualitative Data Analysis Software
CoPS	Complex Products and Systems
CSR	Contract Status Report
DB	Develop Business
EB	Execute Business
FMV	Swedish Defence Materiel Administration (Försvarets Materielverk)
GMS	Global Management System
KPI	Key Performance Indicator
LOC	Levers of Control
MCS	Management Control System
MP	Manage Project
M-form	Multi-divisionalised form
PA-PI	Process Analysis - Process Improvement
PBO	Project-based Organisation
P-form	Project-form
PPM	Project Portfolio Management
SSR	Summary Status Report
U-form	Unitary form
WB	Win Business

# 1 INTRODUCTION

## 1.1 Background

The structure of organisations results from the collective actions of employees in the pursuit of a joint mission (Mintzberg, 1989). In accordance with Merchant and Van der Stede (2012), to reach this mission, management control is an essential part on both the strategic as well as the operational level of an organisation. However, the challenges managers face have significantly changed during the last decades. So-called complex products and systems (CoPS) have become the “*technological backbone of the modern economy*” (Hobday, 2000a, p. 794). Hence, companies are much more impacted by the pace of the technological development, complexity and uncertainty (March, 1995; Maylor et al. 2006), which also has fundamental consequences on the management control system (MCS) (Merchant and Van der Stede, 2012).

CoPS can be defined as “*high cost, engineering-intensive products, systems, networks and constructs.*” (Hobday, 1998, p. 690), they are usually highly customised and produced in a network with several internal and external parties involved. Suppliers of CoPS work for example with telecommunication systems, high-speed rail systems, systems for electricity grids, smart buildings or with products from the aerospace and defence industry such as flight simulators, airplanes and weapon systems (Davies and Brady, 2000; Hobday, 2000a; Prencipe et al. 2003). The aerospace and defence industry is a striking example in this field due to its high-tech focus, the drive of innovation and engineering prowess. Hence, it is one of the key high-tech industries on the global market. Established among the global players in the industry is the Swedish company Saab AB. Saab designs, manufactures and sells world-leading products, services and solution for military and civil security – and is well known for its excellent project management capabilities (Söderlund and Tell, 2012).

These capabilities have been developed in parallel with the increasing importance of CoPS, as Saab has focused its business activities more and more on project structures. More particular, Saab has developed towards a P-form organisation (Project-form), which is characterised by a high focus on cross-functional and temporal project work (Söderlund and Tell, 2012). By providing a structure that enables the coordination of resources in great quantity, and the combination of knowledge and expertise from various fields, P-form organisations have emerged to integrate systems in large scale. Hence, P-form organisations are able to cope with the various demands of CoPS and changing customer requirements, and are thereby suitable for the successful execution of complex projects (Söderlund and Tell, 2008).

The increased focus on CoPS and the corresponding shift towards P-form organisations come along with the challenge for organisations to adjust their MCS in accordance with their strategy and the organisational structure (Canonico and Söderlund, 2010; Nilsson and Rapp, 2005). While a certain amount of freedom and flexibility is essential for productive project work, the MCS must also guide the projects into the strategic direction of the company and ensure efficiency in the project execution. Too much control, or the wrong type of control may constrain the capabilities of the project team and negatively affect its performance (Bonner et al. 2002). To handle this kind of challenge, managers can apply different control mechanisms, ranging from rather informal forms of cultural control to formal instructions and directives (Merchant and Van der Stede, 2012). One renowned framework of management control that is built on four contrasting control levers is the Levers of Control framework introduced by Robert Simons (1995b). With the help of the different levers companies are able to exploit the current business, head direction and foster development and innovation at the same time. However, to gain a holistic view on the MCS of an organisation it is not sufficient to consider these levers just from the corporate perspective, but it is essential to take on a multi-level perspective (Sydow et al. 2004).

Projects in P-form organisations can be embedded in the organisational structure in various different ways. Some projects are allocated in single business functions, others are overarching and cross both functions and hierarchical levels. To ensure that these projects are not working autonomously but in the best sense of the organisation, management control must consider both the interplay of the control levers on the different organisational levels, and the way how the control levers on the different levels are linked to each other. To describe this connection, we introduce the term ‘control linkages’ which interlinks levers on levels and thus strengthen the construct of management control in P-form organisations. Moreover, control linkages can be seen as an enabler for the integration of management control. In accordance with Jannesson et al. (2016) integrated control fosters communication, and supports flexibility and transparent decision making, whereas a lack of integrated control bears the risk to miss out the possibility to streamline behaviour towards a shared business goal (Nilsson and Rapp, 2005) and lose the efficiency of common work procedures (Sinha and Van de Ven, 2005). Hence, control levers that are not connected across the organisational levels of an organisation or even contrast each other, negatively affect the performance of an organisation.

Considering the unique nature of complex projects, and the flexible organisational structure of P-form organisations, it raises the question *“How do P-form organisations use control linkages to integrate levers of control across the organisational levels?”* To answer the question a model has been developed that builds upon Simons’ Levers of Control (1995b) and sets it into the organisational context of a P-form organisation: Levers on Levels. The model distinguishes between control levers on different organisational levels, and takes the versatile characteristics of complex projects and the organisational structure of a P-form organisation into account. Thereby, the model helps to gain a holistic view on management control in P-form organisations and points out the need for control linkages that connect the control levers on the organisational levels to each other and thereby enable the successful execution of complex projects in accordance with the strategy of an organisation.

## 1.2 Problem Discussion and Research Question

Today's fast-paced environment requires companies much more than in the past to be flexible and adjust their organisation to the context they are working in (Teece, 2000). Following the contingency theory, it can be said that there is no best way of organising a company, but the most suitable form depends on the challenges companies face in their area of business (Morgan, 1986). Thus, the structure of a company, consisting of its organisation, MCS and processes must be adjusted to the circumstances in order to gain sustainable competitive advantage (Chandler, 1900; Ray et al. 2004; Teece, 2000).

While in the end of the 19<sup>th</sup> century and the beginning of the 2000s many companies were focused on large scale production (economies of throughput), the increased importance of CoPS has led to a stronger focus on the integration of systems (economies of systems) (Hobday, 2000b; Söderlund and Tell, 2009). The complexity of CoPS and the need for a high level of expertise in a variety of components require the creation of a network consisting of co-suppliers and service providers (Eslami and Lakemond, 2013), and a close collaboration with the customer in order to deliver the product or service in accordance with the requirements (Söderlund and Tell, 2009). To deal with this challenge, P-form organisations have been proven to be a particular suitable form of organisational structure for CoPS producing companies (Hobday, 2000b). This structure enables the integration of knowledge and skills, and thus makes an organisation more flexible and responsive (Söderlund and Tell, 2009).

Besides the organisational structure, also the MCS plays an essential role when it comes to the implementation of a company's strategies (Bromwich and Bhimani, 1994; Dent, 1990), the guidance of employees behaviour (Merchant and Van der Stede, 2012), and the cooperation and collaboration in project settings (Söderlund and Tell, 2009). Different researchers have developed different frameworks that attempt to explain the effectiveness of MCSs in order to support goal achievement, flexibility and experimental search, efficiency and the exploitation of synergy effects (De Haas and Kleingeld, 1999; Rathe, 1960; Simons, 1995b; Thompson, 1967). One of the most tried-and-tested ones among theorists and practitioners is the Levers of Control framework developed by Robert Simons, because it increases the understanding for managers how to effectively utilize control mechanisms in highly competitive environments, and because it is applicable in various industries (Kruis et al. 2016; Martyn et al. 2016). The opposing control systems (levers) of the model can be used to manage competing tensions such as freedom and constrain, empowerment and efficiency, directives and creativity (Kruis et al. 2016; Simons 1995b), and the balance between the different levers helps managers to create a flexible organisation that is able to gain a sustainable market position (Simons, 1995b). Even though the framework has been applied in a number of case studies within the last two decades (Martyn et al. 2016), no comprehensive empirical study has explored the phenomenon of MCS across the different organisational levels of P-form organisations.

A multi-level perspective on MCSs is essential to fully understand the complex topic of management control in organisations (Sydow et al. 2004). Despite this notion, MCS literature that takes multiple levels into account is still limited, and no distinction has been made between different types of organisations and the corresponding differences in terms of organisational levels. This is relevant particular for P-form organisations in which projects are working as partly decentralised units and at the same time are embedded in an organisational structure that aims to provide support and guidance (Söderlund and Tell, 2011). Therefore, the multi-level perspective on P-form organisations must consider the three classical levels corporate level, business level and functional level and in addition a fourth level, the project level, which is crucial for the business performance. While the three former stated can be seen in hierarchical order, the project level can cross internal borders and flexibly be allocated within the organisational structure, depending on the project's scale and scope. By paying attention to the specific characteristics of P-form organisations, and the management control mechanisms managers apply on the different organisational levels, valuable insights can be gained for the execution of complex projects.

In order to interlink the earlier stated control levers across the organisational levels it is further important to understand the connection between the levers on the levels. Nilsson and Rapp (2005) argue for the integration of control systems across the organisational hierarchy, which streamlines communication and transparency and thus enables companies to successfully implement strategy. However, how this integration is achieved is not fully examined. Therefore, the understanding of the ‘control linkages’ is fundamental. Control linkages refer to the direct connection of control levers on the different organisational levels. They connect the intra-organisational activities and provide a common frame of reference that enable both the top-down and bottom-up communication. This is supported by a unified terminology and shared principles, which streamline efficient work procedures and support transparency in planning and monitoring (Nilsson and Rapp, 2005). Having effective control linkages between control mechanisms across the organisational levels in place means to foster collaboration, to support the implementation of company-wide strategies and thereby to improve a company's chances to successfully gain a strong market position.

In the light of a lack of research about management control levers on different organisational levels, an incomplete distinction of organisational levels in P-form organisations and a missing linkage between control levers on levels, we have identified the need to conduct a multi-level study of P-form organisations that considers the connection of control levers on organisational levels. Hence, the overarching purpose of this thesis is to increase the understanding of the control levers used by P-form organisations on the different organisational levels: the corporate level, the business level, the functional level and the project level. Particular focus is on the control linkages that connect levers and levels with each other. This leads to the research question ***“How do P-form organisations use control linkages to integrate levers of control across the organisational levels?”***

By researching in this field, contributions to both theory and practice are made. From a theoretical standpoint, the usefulness of Simons’ Levers of Control (1995b) framework in the context of P-form organisations is tested. Specifically, contributions are made with findings about the different control levers on four different organisational levels. Moreover, the importance of control linkages that connect control levers on organisational levels to enable the integration of management control is highlighted. Thereby, the difficulties that arise from the contingent nature of CoPS and the need to control large amounts of resources, such as people, information and knowledge are underlined.

From a practical standpoint, the topic is worth an in-depth research as the ability to successfully execute projects is essential for P-form organisations to gain and remain competitive advantage in the industry. P-form organisations are able to flexibly react to the market, this comes along with an increased responsibility of the middle and lower management. At the same time, the need for efficiency in a competitive environment is high. This results in the need for managers on different organisational levels to gain a deep understanding about MCSs and further an understanding of how they can apply the system to impact the activities of the employees. Such knowledge helps the management to design an effective MCS and thus improves not only project but also the company performance.

The thesis is based on a single case study of Saab AB, a Swedish aerospace and defence company. With its expertise in complex, high-tech and engineering-intensive product and system solutions, Saab builds its business on an extreme form of CoPS that requires highly educated employees to coordinate their work, exploit opportunities and continuously develop further. This complex setting requires on the one side an in-depth analysis of the phenomenon of management control that is only possible with the help of a single case study, on the other side the study of an extreme case promises to identify particular critical aspects. Thus, the case study helps to gain a deep understanding of the phenomenon of management control and at the same time to draw conclusions that make valuable contributions also for less extreme cases.

The thesis is structured in the following way. The construction of the theoretical framework in section two starts with a literature review on the development of the P-form organisation and its characteristics. Then, the theoretical background of MCS is discussed. Particular attention is paid to the Levers of Control framework and A Tentative Model, which provide a context for the research and build the basis for the creation of a new model, named Levers on Levels. This model enables the analysis of levers of control on four different organisational levels. Section three is devoted to the methodology of the thesis, consisting of research design and research data. The empirical work in section four entails an outline of the management control mechanisms in place at Saab, its functioning and the linkages between the organisational levels. In section five the Levers on Levels model is applied to analyse the earlier presented data. Finally, section six presents general conclusions, theoretical and practical contributions, as well as limitations and further topics of research.

## 2 THEORETICAL FRAMEWORK

*This chapter provides an overview of the theory used to support the research. Firstly, the P-form organisation is described as a specific form of project-based organisation. Secondly, the topic of Management Control Systems is covered, including Simons' Levers of Control framework and A Tentative Model. Finally, the theoretical background serves as basis to create the Levers on Levels model which will be used for the analysis of the empirical data in chapter five and in order to answer the research question.*

### 2.1 The P-form Organisation

During the course of time companies in the modern industrial economy have relied on very different organisational structures (Söderlund and Tell, 2009). Driven by economies of scale and scope, first the unitary form (U-form) and later the multi-divisionalised form (M-form) have been very successful (Chandler et al. 2009). Today, companies from various industries more and more base their business activities on project structures, ranging from pure project based organisations to rather loosely coupled systems (Clark and Wheelwright, 1992; Hobday, 2000b). This organisational structure enables flexible responses to customer and market changes and to deal with an increased product complexity and technological uncertainty (Hobday 2000b; Thiry and Deguire, 2007).

In the context of CoPS, Söderlund and Tell (2009) have introduced the term 'P-form organisation' as a specific form of project-based organisation (PBO) that is particular suitable for the production of highly complex products and systems. The term originates in a description of organisational structures by Hedlund (1994) that focuses on the combination of knowledge in the form of temporary cooperation. More specifically, Hedlund argues for organisational structures that build upon the skills of individuals to communicate and cooperate on the functional level; on the managerial skills to empower instead of control teams; the concentration of focus areas of competence; and low hierarchical structures. The P-form organisation is particular focused on temporality and cross-functionality of project work. Moreover, Söderlund and Tell (2009) pay special attention towards knowledge integration and the dynamics generated in this kind of organisations. The following Table 1 provides an overview of the characteristics of P-form organisations.



*Table 1: Characteristics of the P-form Organisation*

<b>Characteristics</b>	<b>P-form Organisation</b>
Type of output	Complex product/systems with customised output
User involvement	High degree of user involvement in the innovation process
Productivity improvements	Economies of system
Production technologies	Intensive technologies
Mode of production	Batch production
Knowledge process	Knowledge combination
Unit of production	Project
Type of communication/cooperation	Horizontal communication and cooperation
Core capabilities	Systems integration and project management

Source: Söderlund and Tell (2009, p. 103).

The project-based structure of the P-form organisation supports adaptability and flexibility, but at the same time results in the difficulty to ensure organisational stability (Söderlund and Tell, 2009). Aspects such as the lack of continuity, the risk to isolate projects and the personnel turnover make it difficult for P-form organisations to create a stable framework for their business (Prencipe and Tell, 2001; Whitley, 2006). Therefore, P-form organisations must be seen from two different perspectives: the project temporary combines the knowledge and skills of specialists, and the organisation provides a permanent structure for the flux of projects (Söderlund and Tell, 2009). In this sense, the relationship between the organisation and the project can be seen as a temporary decentralisation in which certain projects are created for the purpose of attaining a certain target. The sum of the targets leads to the overarching goal of the company (Söderlund and Tell, 2011).

These decentralized units of P-form organisations execute complex projects that are unique, heterogeneous, highly interconnected and often last several years (Hobday, 2000b). However, their permanence is limited in time and uncertainty, and ambiguity may be severe (Söderlund and Tell, 2009). Despite this nature, which makes it difficult for companies to learn from reoccurring patterns, P-form organisations execute projects on a regular basis and hence have developed high project management skills, strong routines and procedures (Ibid.). The ability to manage these projects as well as the sum of continuously changing projects in the company can constitute a decisive competitive advantage (Gann and Salter, 2000).

## 2.2 Management Control Systems

The importance of MCSs as tool to directly impact the performance of organisations has gained increasing attention since the 1960s (Merchant and Van der Stede, 2012; Simons, 1994). One of the first definitions of management control is from Anthony (1965, p. 17), who defines management control as the *“process by which managers assure that resources are obtained and used effectively and efficiently in the accomplishment of the organization’s objectives.”* Similarly, Merchant and Van der Stede (2012, p. 6) argue that MCSs can *“influence employees’ behaviour in desirable ways and, consequently, increase the probability that the organisation will achieve its goals.”* More specifically, Merchant and Van der Stede (2012) differ between two perspectives on control systems: strategic control refers to the validity of the overall strategy; and management control refers to the execution of businesses and the behaviour of the employees in the organisation’s best interest. Thereby it can be argued, that strategy plays an important role, but that the execution is the critical component that determines the success of organisations (Ibid.).

Literature on MCSs has introduced several frameworks that structure and categorise modes of control in organisations (Haustein et al. 2014). Simons (1995b, p. 5) builds on formal forms of control and states that *“management control systems are the formal, information-based routines and procedures managers use to maintain or alter patterns in organizational activities.”* He introduces the terms belief system, boundary system, interactive and diagnostic control on the one side to foster creativity and innovation, and on the other side to set limits with the help of rather reactive, formal feedback tools. In a similar manner, De Haas and Kleingeld (1999); and Thompson (1967) argue for different control mechanisms in different organisational settings. Participative designed systems, or open-system approaches, are suitable for situations that are characterised by uncertainty and dependency. They trigger learning and search and thus make organisations more adaptable. In contrast, cybernetic designed systems, or closed-system approaches, are more suitable for stable and predictable situations, as they are focused on a limited number of controllable variables (De Haas and Kleingeld, 1999; Thompson, 1967). Thus, there is no right or wrong choice of management control, but there are certain environmental and organisational factors that determine control and help management to effectively guide the activities of an organisation.

### 2.2.1 Management Control Systems in Project-Based Settings

Despite the expanded stream of literature on MCS topics and the increased number of organisations that work with project based structures, there has only been little research on MCSs in PBO (Canonico and Söderlund, 2010). In contrast to functional organisations, PBO are often decentralised (Lindkvist, 2004) and organised in loose networks of individuals (Acha et al. 2005). This results to a number of challenges for management control in PBO.

From a strategic perspective, PBO face the challenge to handle not only one but a bundle of projects, to transfer knowledge from one project to the other and thus build organisational capabilities (Acha et al. 2005; Brady and Davies, 2004). Moreover, managers need to ensure that projects are not working autonomously but in accordance with the overall vision and strategy of the company (Canonico and Söderlund, 2010; Clark and Wheelwright, 1992). The term portfolio management has been established as the highest organisational form and refers to the sum of projects running parallel in an organisation (Andersen and Jessen, 2003; Meskendahl, 2010). One level below, program management is concerned with the coordination of projects that share a common goal. The lowest level is the pure project management, which deals with individual projects (Andersen and Jessen, 2003; Maylor et al. 2006).

In the context of temporary and cross-functional project settings (P-form organisations), management control aims to unite specialists (Lindkvist, 2004), limit uncertainty and provide a tool that help managers to perform their work and take decisions (Canonico and Söderlund, 2010). Moreover, MCSs help to identify problems early and enable managers to take corrective actions (Vanhoucke, 2014). Thereby, management faces the challenge to implement processes that are both firm and flexible at the same time in order to benefit from standardisation and still be adaptable in accordance with the unique requirements of the project (Tatikonda and Rosenthal, 2000; Thiry and Deguire, 2007; Vanhoucke, 2014).

The increased projectification in organisations has also led to an increase in formal control systems (Räisänen and Linde, 2004), such as Cooper's (1990) stage-gate process. Stage-gate processes are used to guide projects with the help of defined work phases (stages) and decision point (gates) on which managers or steering groups decide about the project progress. However, it has also been noticed that only formal processes lack of flexibility (Morris and Jamieson, 2005). Too complex processes are counterproductive as they foster rigid behaviour, and the processes cannot be considered as fixed and linear, but they must be adjustable and support double loop learning (Cooper, 2008).

To overcome this rigidity, clear roles and responsibilities must be in place (Morris and Jamieson, 2005), as well as guidance with the help of cultural control and social intervention. Such kind of control forms empower employees to act flexibly within set boundaries, which can be considered to be crucial for project success (Räisänen and Linde, 2004).

### 2.3 Levers of Control

Simons (1994) points out the power managers have by applying mechanisms of management control in order to implement business strategies. Particular in fast-paced environments that are uncertain, fluctuate and characterised by change, he stresses the need for a balance between restraining and enabling forms of control to support the activities of employees (Ibid.). The focus is thereby on those management control mechanisms that are used to process information across organisations. In accordance with the earlier stated definition of MCSs, these mechanisms are (1) formal, which means that they are explicit in the form of routines or procedures (2) information-based, which means that a specific signal, message, plan or goal is communicated and (3) they aim to maintain or adjust patterns in terms of activities (Simons, 1995b). The original framework developed by Simons is concerned with management tools on the corporate, not the business or functional level of an organisation (Ibid.).

Simons introduces a framework of management control named Levers of Control (LOC) (1995b). In the centre of the framework is the business strategy, which is the means by which a company sets out to compete in the market and achieves its goals. Around that are four strategic key areas that must be examined and understood in order to choose the responding mode of control (Ibid.). Figure 1 shows the LOC framework as introduced by Simons (1995b).



*Figure 1: Levers of Control*

Source: Simons (1995b, p. 7).

Each of the levers fulfils a certain task (Simons, 1995a). However, the power of the framework lies in the dynamics created by the interplay of the levers (Mundy, 2010). Belief and interactive control systems are positive forces that foster innovation and strategic renewal; boundary and diagnostic control systems are negative forces that ensure compliance and set limits (Simons, 1995b). Both the explorative and the exploitative activities need to be managed to ensure sustainable success for the company (March, 1991). An inability to find a balance between the forces can impact decision making, resource allocation and the stability of a company negatively (Mundy, 2010). In the following subsections the single levers are presented more in depth.

### 2.3.1 Belief System

Each company fulfils a purpose and strives for goals. However, the larger the company grows, the more complicated and important it becomes to communicate these (Merchant and Van der Stede, 2012). The belief system supports the managers to create commitment among staff, and to create an inspiring atmosphere that fosters creativity and innovation (Marginson, 2002). Explicitly, the belief system is the *“Set of organizational definitions that senior managers communicate formally and reinforce systematically to provide basic values, purpose and direction for the organization.”* (Simons, 1995b, p. 34). To reach the intended commitment and inspiration, these definitions are typically broad and value-laden, and they do not explicitly state activities or instructions (Mundy, 2010).

The belief system can be a powerful and influential tool for managers (Mintzberg, 1989). It is based on the formal statements such as the mission statement and the purpose of a company (Simons, 1995b), but also on tools such as the Balance Scorecard, or staff meetings (Mundy, 2010). Communicated in a convincing way, the values and beliefs about an organisation can create an ideology that decisively distinguishes a company from its competitors (Mintzberg, 1989). Particularly in uncertain settings and in temporary collaborations of experts, the belief system can frame a stable environment for employees that guide their actions and decisions into the direction of the company's goals (Merchant and Van der Stede, 2012; Mundy, 2010).

### 2.3.2 Boundary System

The boundary system is an important opponent of the belief systems as it sets limits to the search for opportunities and innovations (Simons, 1995b). Thus, managers can on the one side foster creativity, but on the other side prevent employees from wasting resources and provide result-oriented guidelines for their search (Mundy, 2010). Therefore, in contrast to the belief system, the boundary system consists of organisational definitions that are phrased negative or set minimum levels (Simons, 1995b). In accordance with Barnard and Andrews (1968), setting limits to choices in these forms is the prerequisite for efficient decision making in organisations.

Despite the restraining character, the boundary system enables flexibility as it is a way to delegate responsibility and thus enables a company to speed up actions and decisions (Simons, 1995b). The tools that are used to set boundaries can be codes of conduct, strategic planning systems or operational guidelines (Ibid.). More in detail, they can consist of financial terms that limit financial risk, and of non-financial terms, which have a more strategic character (Tuomela, 2005). However, boundary systems always bear the risk to be too tight and thus hinder a company to adapt to market changes. Managers must be aware of this and prevent the boundary system from becoming rigid and irrevocable (Simons, 1995b).

### 2.3.3 Diagnostic Control System

The diagnostic control system is a classic form of management control that compares the actual performance of a company with intended outcomes. Thus, it is a monitoring and feedback system that is driven by goals and targets (Simons, 1995b). Critical performance variables, or key success factors, are those factors that are crucial for the business success (Ibid.). The constant measuring of these factors enable managers to identify deviations early and take corrective actions (Mundy, 2010). Simultaneously, diagnostic control is a way to motivate employees and to evaluate the business and managers (Henri, 2006; Simons, 1995b).

An effective diagnostic control system can be built up when managers are aware of the critical success factors for the business, if the employees have the ability to influence these factors and when it is possible to objectively measure the performance (Merchant and Van der Stede, 2012). The measurement tools can be profit plans and budgets, goals and objective systems or strategic planning systems (Simons, 1995b). Difficulties in the usage of diagnostic control systems arise if goals are not clearly defined, or incentives are misleading.

This can result in behavioural displacement or gamesmanship that negatively affect the business performance (Merchant and Van der Stede, 2012).

#### 2.3.4 Interactive Control System

In contrast to the diagnostic control system, the interactive control system is not measuring past and current performance but is focused on the present and the future (Simons, 1995b). Interactive processes enable communication and collaboration among different functions and levels of an organisation, as it fosters interaction, dialog and organisational learning (Hobday and Brady, 1998; Mundy, 2010). Thus, managers can involve themselves in the decision making of their employees (Simons, 1995a), they can also use the system to question established rules and routines and continuously re-estimate the future (Simons, 1995b).

The interactive control systems are another tool for managers to share a vision, set priorities and stimulate creative search (Simons, 1995b). By taking the decision to use a management tool interactively, which means to pay special attention and to be engaged in the process, managers stress the importance of certain topics (Dahlgren and Söderlund, 2010; Simons, 1995a). In the same way, interactive control can be used bottom-up. By involving employees in planning processes and encourage discussion and debate managers gain valuable insights and knowledge that can support strategic decisions making (Mundy, 2010). However, interactive control requires the attention of managers in the form of frequent meetings, weekly reports or face-to-face meetings (Simons, 1995b). Therefore, this form of management control can be considered as costly and time-consuming (Widener, 2007).

#### 2.4 A Tentative Model

‘A Tentative Model’ developed by Nilsson and Rapp (2005) is a model to analyse the linkages between a company’s environment, the congruence of strategy and the integration of control mechanisms in order to explain competitive advantage and performance. The model is built on the assumption that the match of the external environment and the internal structure of an organisation directly affects the position of a company in the market and thus its potential success. As the original model introduced by Nilsson and Rapp (2005) is designed mainly for the manufacturing industry there is a close link between management control and manufacturing control. However, due to the focus of the thesis in the field of management control, the model has been simplified and excludes the aspect of manufacturing control.

Figure 2 shows the simplified version of the model that visualises the relationship between the environment, the strategy and the MCS of organisations.

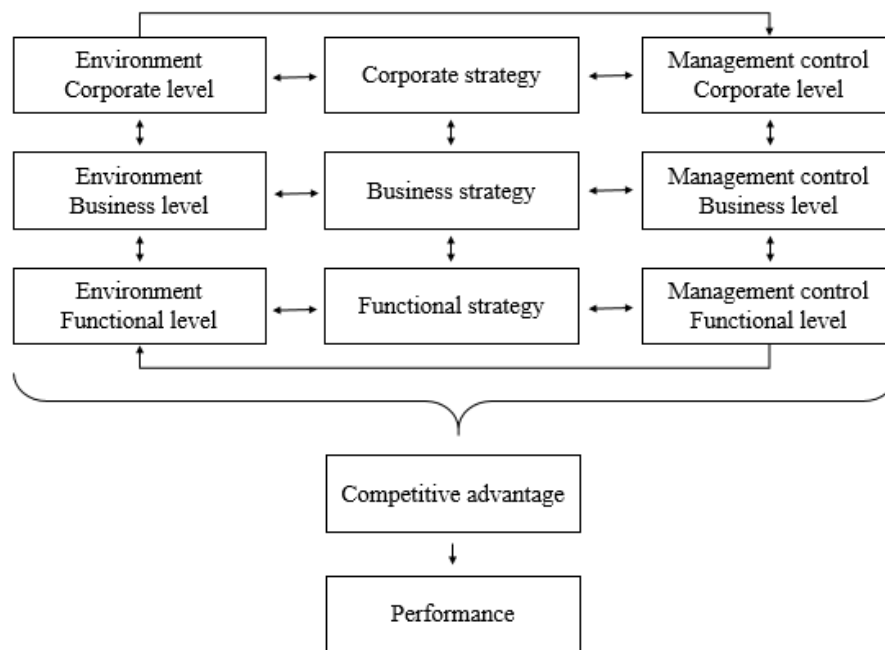


Figure 2: Simplified Version of A Tentative Model

Source: Nilsson and Rapp (2005, p. 130).

The external environment plays an important role for the strategic decisions of companies (Porter, 1979). The fit between the environment and the goals and policies that align the strength and weaknesses of a company with the developments of the market has been one of the early explanations for the success of companies in competitive markets (Porter, 1991). However, strategy is not a rigid but a dynamic concept that requires continuous adjustments (Miles et al. 1978; Porter, 1991). Companies must frequently review the match between the environment and their internal resources to ensure their strategic position (Nilsson and Rapp, 2005). In addition to the link between environment and strategy, Nilsson and Rapp (2005) stress the link to management control as crucial for the business success. Thereby, the authors refer to Anthony (1965) who describes MCSs as the decisive tool to put strategy into practice.

By applying the terms strategic congruence and integrated control, Nilsson and Rapp (2005) acknowledge that strategy and management control cannot only be viewed from the corporate level, but that the business and functional level are equally important. Strategic congruence is described as the mutual consistency of the strategies on the corporate, business and functional level.



Hence, the strategies on the different levels fit together and support the coordination of activities towards a common goal (Jannesson et al. 2016). In order to implement the strategies, it is necessary to exchange knowledge and information between the levels of the organisation. Thus, integrated control is referred to as coherent strategic planning and follow-up mechanisms across the organisational levels. Thereby, integrated control fosters transparency and supports decision making (Nilsson and Rapp, 2005).

The tentative model provides the framework for our in-depth research in the area of management control. Thereby, we follow the early approach of researchers such as Miles et al. (1978); and Porter (1991) who point out the link between environment and strategy, and also Anthony (1965); and Nilsson and Rapp (2005) who stress the importance of MCSs in order to implement strategy. However, the focus of the research is not the strategic congruence or the horizontal linkages between strategy and control on the different organisational levels, but on the vertical control integration. Therefore, the control mechanisms are analysed in accordance with the overall corporate strategy. The tentative model helps to set the context for the research. Moreover, the model is used to describe the connections between management control on the corporate level and lower management levels. Overall, the model supports the relevance of integrated management control in order to ensure competitive advantage and business performance.

## 2.5 Integrated Management Control

Management control research has long been focused on only one or two organisational levels (Jannesson et al. 2016; Luft and Shields, 2003). The reason for that might be that the scope of complex control settings and connections is difficult to cover (Luft and Shields, 2003). However, as management control across the different organisational levels may differ significantly (Fisher, 1995), only multi-level studies are likely to capture the full view of contextual embeddedness (Sydow et al. 2004).

Multi-level studies try to obtain a holistic view of the MCS of an organisation (Jannesson et al. 2016). Thus, they might be concerned with the individual, organisational units, the organisation itself and even transorganisational control (Luft and Shields, 2003; Sydow et al. 2004). Even though a project is a temporary system that can exceed organisational units, it is likely that the project is embedded in a more constant setting (Sydow et al. 2004).

The coordination of the activities within and across organisations in accordance with the strategy of a company can be crucial for the development of an organisation and thus its business success (Nilsson and Rapp, 2005; Sydow et al. 2004).

In dynamic environments, strategy implementation is not a top-down process anymore. Taking on only the corporate level perspective creates the risk of gaining a limited understanding (Luft and Shields, 2003). Instead, the focus on project work implies that lower level employees take over more responsibility (Lindkvist, 2004). They are responsible for the allocation of resources and the translation of the strategy into actions (Langfield-Smith, 1997). Hence, the middle management links the upper management with the operational level of an organisation. The success of a strategy might be directly impacted by the translation of strategy across the organisation and the decisions and activities taken on the shop floor of an organisation (Langfield-Smith, 1997; Marginson, 2002; Nilsson and Rapp, 2005).

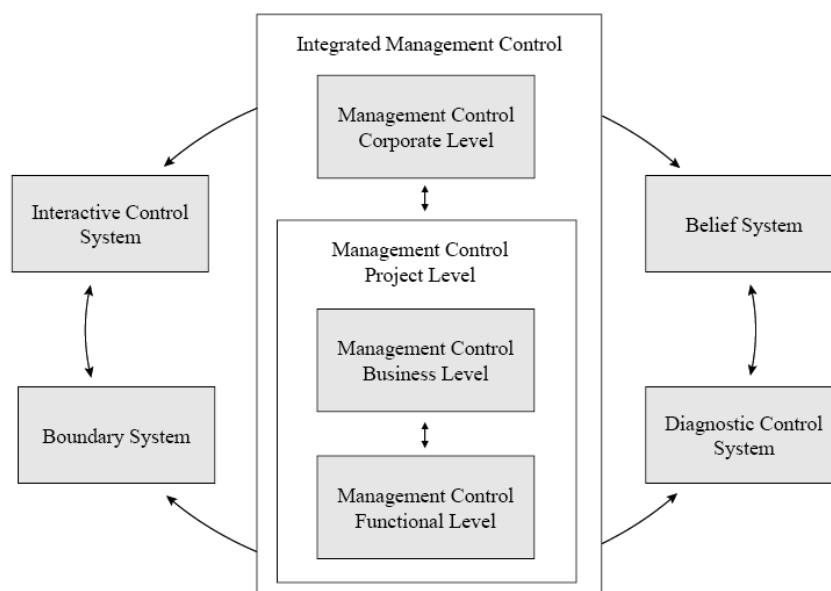
Executing management control within a multi-level organisation that is built on cross-functional project work is far more challenging than classical hierarchical structures (Sinha and Van de Ven, 2005). This is due to the dilemma of the autonomy requirements of the project, the embeddedness of the project in the organisation, and the need for efficient work procedures (Sydow et al. 2004). On the one side, rather loose coupled control systems enable workers to exploit short-term advantages. On the other side, loose coupling allows competing logics (Storey, 1985) and the separation of projects from the overall organisational structure (Söderlund, 2008). Thus, organisations must foster complementarities and positive interactions to maximise synergetic effects in accordance with the different constraints prevalent at the different levels inside the organisation (Sinha and Van de Ven, 2005).

The limited number of studies that are concerned with MCSs on different organisational levels point out the importance of effective linkages across the levels for the successful business execution (Langfield-Smith, 1997; Sydow et al. 2004). In accordance with Nilsson and Rapp (2005) the coherence of planning and follow-up mechanisms across the organisational levels create integrated control and thus enable a consistent and efficient flow of information and knowledge (Jannesson et al. 2016). Communication in the form of meetings and the combination of diverse, and partly interlocking management control mechanisms can be applied to strengthen the link between the levels and create a common understanding of working procedures (Langfield-Smith, 1997; Storey, 1985). This kind of transparency provides a strong foundation to plan resources and make short-term and long-term business decisions (Nilsson and Rapp, 2005), and it fosters discussion, which can also be beneficial for the development of the strategic direction of the company (Jannesson et al. 2016).

Integrated control can also be supported with systems and software that allow the automation of processes. This makes information available quickly and offers great data analysing functions (Rom and Rhode, 2007). Thus, it is easier to keep the overview of the activities inside the company, and different business areas are better comparable due to a shared database and shared parameters. However, the standardisation of the process also forces all businesses into a common control tool and thereby limits the possibilities to adjust the scope in accordance with specific situations on the lower level of the organisation (Jannesson et al. 2016).

## 2.6 A New Model: Levers on Levels

The review of the literature in the field of management control and P-form organisations indicates that the integration of control mechanisms across the organisational levels of this kind of organisational structure has not been researched yet. To make a contribution to a better understanding of the MCS on different organisational levels, and the linkages between the levels, the tentative model developed by Nilsson and Rapp (2005) is taken and combined with Simons' LOC (1995b). This results into a newly generated model: Levers on Levels which is visualised in Figure 3.



*Figure 3: Levers on Levels*

Source: Inspired by Nilsson and Rapp (2005, p. 130) and Simons (1995b, p. 34).

Starting from the tentative model, firstly, the number of levels is increased by one: the project level. This is due to the reason that large P-form organisations are often organised in more than just three hierarchical levels. Companies such as Ericsson, Saab or ABB have a widely diversified product portfolio, and they are operating in several different regions. To organise this kind of business, complex matrix structures are required (Söderlund and Tell, 2009). In P-form organisations, the project is the main tool to link different lines and thus benefit from the knowledge of its employees. Depending on the purpose of the project, it can have different scopes. It can be embedded within the functional level, or in the business level. But it can also cross borders and link different units and areas. Therefore, the project level covers both the business and the functional level of the organisation. It must be seen as a flexible tool within the hierarchical structure. Thus, the project enables not only the vertical but also the horizontal communication and cooperation. Acknowledging this characteristic of the P-form organisation, and the system integration and project management as core capabilities, the additional project level is important to gain a holistic view about the management control tools used to reach successful business execution.

Secondly, the different mechanisms of control on the organisational levels are analysed with the help of Simons' (1995b) LOC framework. Driven by the overall strategy of the company, it is examined how the different levers of control are used on the different levels of the organisation. The arrows between the control levers symbolize that the levers cannot be seen separately, but that they are continuously affecting each other. In accordance with Kruis et al. (2016) the interplay of the levers creates dynamic tensions between innovation and change on the one side, and goal achievement and exploitation on the other side. Hence, only the combined usage supports the long-term success of an organisation.

The sum of the levers on each level creates the MCS for each level. Moreover, the model is used to identify the linkages between the levels. In accordance with the theory on multi-level control and integrated control, it is analysed how P-form organisations use their control mechanisms to align the control mechanisms on the different levels, hence create integrated control that supports the successful business execution in line with the corporate's strategy.

### 3 METHODOLOGY

*This chapter outlines the selected methodology that has been used in this research. The research design and strategy are defined, as well as the research data procedures and also how the quality of the study was managed.*

#### 3.1 Single Case Research Design

The purpose of this thesis is to increase the understanding of MCSs on the different levels of a P-form organisation, and the control linkages between the levels. Thus, a ‘how’ question is formulated in order to investigate how P-form organisations use control linkages to integrate levers of control across the organisational levels. This purpose laid the path for the research methods used in the thesis (Bryman and Bell, 2015; Saunders et al. 2016; Yin, 2011).

To answer the research question, a qualitative case study was chosen to be a suitable research design. This design is particularly adequate when there is a need for an exploratory, in-depth assessment of a phenomenon within its real-life context (Crowe et al. 2011; Dubé and Paré, 2003). It also enables researchers to both develop existing theory and generate new theory (Bryman and Bell, 2015; Crowe et al. 2011; Eisenhardt, 1989). The essence of a case study in general is the empirical investigation of a phenomenon, using several sources of evidence (Saunders et al. 2016; Siggelkow, 2007; Yin, 2011). Thus, case studies help to gain knowledge from different perspectives in a certain field of research, increase understanding or strengthen previous research findings. Moreover, this approach enforces researchers to dedicate careful attention to their case, which later on nurtures a sophisticated analysis (Eisenhardt and Graebner, 2007; Stake, 1995).

Within the scope of case study research, there are different types of case studies. In regards to the number of cases studied, researchers can either conduct a multiple or a single case study (Crowe et al. 2011; Saunders et al. 2016). This research adopts a single case study approach. Single case studies are suitable to answering research questions that are situated in a highly complex environment and thus require an in-depth investigation in order to fully understand the phenomenon (Crowe et al. 2011; Saunders et al. 2016; Yin, 2011). Considering the manifold nature of MCSs in the course of complex project execution, the context is of central importance in this study. Therefore, a P-form organisation is studied in detail, which enables a holistic view on the MCS in place within this specific kind of organisational structure.

In addition, the single case study employs a revelatory design as the researchers had access to information which had not been available for research before. This enables to analyse the phenomenon of MCSs in a setting that had previously been inaccessible to scientific investigation (Tellis, 1997; Yin, 2017).

Another distinction within case studies can be made based on the unit of analysis, which refers to the levels on which an investigation takes place. Either the analysis is focused on one level, or the study employs multiple levels in the case analysis (Saunders et al. 2016; Yin, 2011). This single case study takes on a multi-level perspective. By having a multi-level study, it is possible to gain a deeper understanding of how the MCS on the different levels of the organisations is applied. Particular, the relationship of the different tools of management control across the organisational levels can be examined.

Finally, case studies can differ in regards to their time horizon. Some case studies focus on capturing a snapshot of the phenomenon whilst others try to capture change over time (Miller, 1996; Van de Ven, 2007). Three earlier conducted case studies at the case company build the foundation for a longitudinal perspective on the development of the MCS in accordance with the company's development towards a P-form organisation. However, particular attention is paid to the analysis of the status quo and the way how the case company applies and integrates MCSs to successfully execute complex projects.

Critics in the context of single case studies are mainly concerned with the generalisability and unconvincing research results. Due to the unique context of the research, the findings are often very specific and strongly connected to the settings of the chosen case. Therefore, drawn conclusions often lack of generalisability (Bassey, 1999; Otley and Berry, 1994; Saunders et al. 2016; Yin, 2009). However, in revelatory cases researchers can use their access to previously inaccessible data to gain in-depth case details (Tellis, 1997; Yin 2017). The study of extreme or unique cases where researchers gain a richer, more precise understanding of a phenomenon can help to also explain more typical cases (Saunders et al. 2016). Therefore, independently from its unique setting the single case study can have a great exemplary power and make valuable contributions also to other cases (Flyvbjerg, 2006).

Considering the complexity of the phenomenon of management control in the context of P-form organisations, the decision to conduct a single case study at the company Saab AB was made. This choice is a revelatory case as one of the authors has been working for the company and therefore has an established relationship to a number of employees. Building on this relationship it was possible to arrange interviews with several employees on all organisational levels. During the interviews a trustful atmosphere was created naturally.

Moreover, being an employee of the case company made it possible to access the intranet of the company, hence a great number of internal documents. While this relationship can be considered as very beneficial in the data collection, it also bears the risk to be biased. Therefore, it was considered to be very important to take on the role as a researcher, not as a colleague, in the interviews and to be very reflective. Moreover, the internal perspective was complemented with the external perspective from the second researcher who did not have an earlier relationship with the company. Thus, it was possible to benefit from the internal view of the one, and at the same time from the external, neutral view of the second researcher.

In addition to the great access of information, the company was chosen because it represents not only a typical but also an extreme case of P-form organisation. Working with CoPS in the context of aerospace and defence requires project collaboration at large scale, and great system integration competences. The organisational structure exceeds the classic distinction of three organisational levels, and the project work plays an important role and has a long history in the company. Moreover, the role of technological development and innovation are essential for the long-term business success. These characteristics distinguish Saab from the classic examples of P-form organisations. Researching an extreme case aims to identify critical aspects of the researched phenomenon (Yin, 2017). These findings are considered to be valuable also for other cases as the fast changing business environment requires also more classical organisations to adapt to the changing conditions, hence to develop flexible structures, be innovative and find a way to explore future opportunities across all the levels of an organisation.

### 3.2 Research Strategy

The research strategy is essential to define the direction of the study. Based on the research question and the purpose, the strategy guides direction and enables a structured analysis of the research topic. Typically, case studies aim to seek new insights into a phenomenon. Therefore, the central role of a case study is exploratory. Exploratory research does not aim to offer final solutions but to determine the nature of a problem and thus helps to increase the knowledge and the understanding of a phenomenon (Otley and Berry, 1994; Saunders et al. 2016). Bryman and Bell (2015) further explain that exploratory studies are suitable for research which addresses a subject that entails high levels of uncertainty or has not yet been examined in depth, therefore there is little existing research on the matter.

As the research question is concerned with an area that has little previous empirical research, the thesis is mainly exploratory in nature (Nilsson, 2002). However, as the aim was not only to explore the phenomenon of MCSs in P-form organisation but also to use existing theory, namely Simons' LOC framework (1995b), to explain the control systems, the study is partly also explanatory. Explanatory research is more in detail concerned with the explanation of certain aspects in the study (Saunders et al. 2016). This counts on the one side for the usage of MCSs on the different organisational levels, but also for the relationship and linkages between the levels. The case study therefore covers both exploratory and explanatory aspects, but with a focus on the former stated.

In the context of single case studies that aim to explore and to explain a certain phenomenon, there are different approaches of how to answer the corresponding research question. Case studies can be concerned with the development of hypotheses based on existing theory and the testing of these hypotheses, also called deduction. Alternatively, they are concerned with the generation of new theory based on findings, known as induction (Eisenhardt, 1989; Van de Ven, 2007). None of these approaches is superior to another, and they are not mutually exclusive. Instead, they can be applied in the most suitable way to answer the research question (Saunders et al. 2016). In this sense, several researchers have highlighted the advantage of combining the two approaches in order to achieve a great understanding of the research topic (Bryman and Bell, 2015; Otley and Berry, 1994; Saunders et al. 2016; Van de Ven, 2007).

Single case studies and particular extreme ones often require an inductive research approach in order to collect new data that can emerge into theorization (Creswell, 2007; Saunders et al. 2016). In line with this, an inductive research approach based on secondary data collection, semi-structured interviews and a workshop at the company is applied. The aim is to shed light on the phenomenon of MCSs, develop a deep understanding and thus generate theory. However, as part of the research implies the application of the LOC framework, and thus existing theory, also the deductive approach is relevant for the research (Otley and Berry, 1994; Saunders et al. 2016; Siggelkow, 2007). Therefore, the study adopts both research approaches but with a final emphasis on induction.



### 3.3 Research Data

#### 3.3.1 Process Analysis – Process Improvement

Complex real-life issues require a pluralistic view from both theory and practice. Researchers need to be engaged in their field of research and work closely together with practitioners. In that way it is possible to gain a full understanding of reality and make contributions that are able to bridge the theory-practice gap in literature (Van de Ven, 2007). Hobday and Brady (2000) have developed a hands-on method called 'Process Analysis - Process Improvement' (PA-PI) that is particularly suitable for the improvement of CoPS. In this thesis, the method is not applied in order to improve CoPS but with the aim to on the one side learn about the management control modes in place, its merits and pitfalls; and on the other side to ensure the close cooperation with the case company, and thus to make contributions that are relevant for practice. Moreover, the method is considered as particularly valuable because it covers different levels of the organisation, which helps to examine the view on MCSs throughout the organisational structure as well as the linkages between the levels.

The PA-PI model consists of five main steps: (1) the first step is to identify a structured group for interviews and a workshop. (2) After identifying the participants, data needs to be collected with the help of interviews. Thereby it is important to find out how processes and procedures are supposed to be (theory), and how they are carried out in real life (practice). (3) With the help of the collected data, the researchers can identify key variances and hotspots. (4) It is then possible to conduct a workshop in order to further verify identified problems and their causes, and to develop potential solutions. (5) The last step in the model is to make a summary report of the findings and solutions which is forwarded to the management (Hobday and Brady, 2000). In the following sections of the methodology it is described how these steps were performed accordingly in the course of the research.

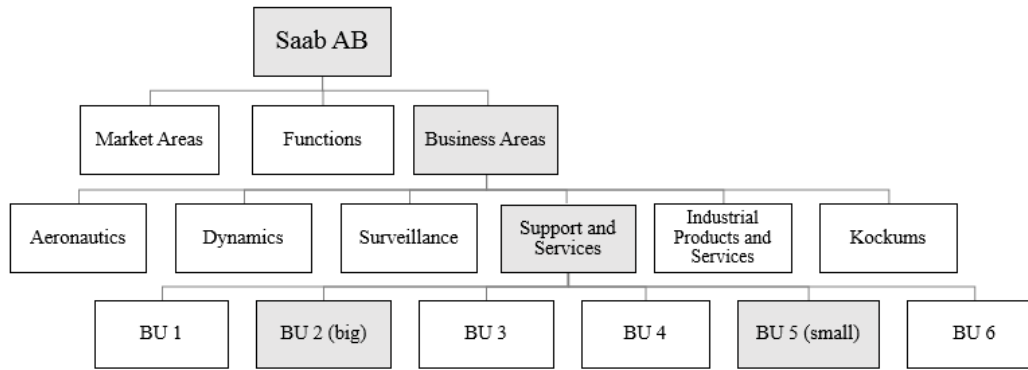
#### 3.3.2 Data Selection

The first part of the data selection was already explained earlier, the choice of the case company. A qualitative research further requires a within-case sampling that represents the conditions for the research (Merriam, 2009; Miles et al. 2013). This is also in line with the embedded research design of single-case studies, which means that the research contains several sub-units of analysis (Saunders et al. 2016; Yin, 2003).

To answer the research question it was needed to gain understanding about the MCS in general, and the MCS on the different organisational levels and its linkages in particular. Saab's operational work is mainly executed through six Business Areas (BAs), namely Aeronautics, Dynamics, Surveillance, Support and Services, Industrial Products and Services, and Kockums (see Figure 4). All of these BAs have several Business Units (BUs) and are working with complex products, systems and services, the business is based on complex project work and highly interconnected.

After an initial meeting with a representative from the company, the decision for a reputational case selection was made, which means to follow the recommendation of an expert (Miles et al. 2013). Thus, the boundaries for the research were set around the BA Support and Services, a BA that is concerned with a broad range of different projects in terms of scope, scale and both products and services. The advantage of the reputational case selection is that the expert has a better overview of the structure, activities and procedures in the company and thus is better able to choose a suitable area for the research (Ibid.). In addition, it is likely that following such an advice opens new doors for the research. However, it is also acknowledged that such an advice can be biased in the form that the expert has a personal interest in conducting the research in a certain area.

The study was further narrowed down to two BUs within the BA Support and Services. In consultation with the case company, the names of the BUs are not mentioned. However, it was one BU that is rather concerned with large-scale projects (average contract value of 242 million SEK), and another one that works with comparably smaller projects (average contract value of 6.7 million SEK) (see Figure 4). This polar type sampling enables a wider perspective, despite the limited number of cases observed (Van de Ven, 2007). The time constraints of the thesis work would not allow an in-depth data collection in all the BUs. Instead of scratching the surface of each BU, we aimed to gain the full understanding of the phenomena of management control within the chosen two BUs. This understanding was further a prerequisite to add another level to the analysis: the project level. By selecting two rather different BUs the risk to analyse an exceptional case was further reduced (Ibid.).



*Figure 4: Saab's Organisational Chart*

In accordance with Hobday and Brady's PA-PI model (2000) it was then needed to select potential employees for the interviews and the workshop. Together with a representative from the BA Support and Services the choices were made based on the employee's role within the organisation. The aim was to take a purposeful sample (Merriam and Tisdell, 2015; Miles et al. 2013) of employees that are directly working with MCSs and thus can provide insights into the activities, processes and mechanisms in the context of management control. Furthermore, the sampling choices developed iteratively, which means that in the course of the research additional sampling decisions were made based on newly gained information (Marshall, 1996; Miles et al. 2013). Finally, 15 employees on four organisational levels were interviewed. Table 2 provides an overview of the roles of the interviewees within the organisation.

*Table 2: Interview Participants*

Position	Short Title	Org. Level	Type of Interview	Years at Saab	Years in the Current Role
Head of Quality and Environment Group Functions	Head of Quality	Corporate	Skype call	22	8
Executive VP & Deputy CEO Group Functions	Executive VP	Corporate	Skype call	30	1,5
Director Sales and Project Management Processes	Director Processes	Corporate	Face-to-face	15	7
Head of Finance and Operational Excellence	Head of Finance	Business	Skype call	10	10
Business Excellence	Business Excellence	Business	Face-to-face	10	5
Head of Strategy Functions	Head of Strategy	Business	Skype call	28	6
Head of Department (small)	Head of Department small	Function	Face-to-face	5	2
Head of Department (big)	Head of Department big	Function	Face-to-face	14	2
Head of Business Unit (big)	Head of BU big	Function	Skype call	25	4
Head of Business Unit (small)	Head of BU small	Function	Skype call	10	4
Head of Section (small)	Head of Section small	Function	Skype call	13	11
Project Manager (small)	Project Manager 1 small	Project	Face-to-face	5	1,5
Project Manager (big)	Project Manager 1 big	Project	Skype call	37	1
Project Manager (small)	Project Manager 2 small	Project	Skype call	15	10
Project Manager (big)	Project Manager 2 big	Project	Face-to-face	9	9

### 3.3.3 Data Collection

The database for the research mainly consists of qualitative data, which means data in the form of words. Typically, qualitative data results from interviews, observations, pictures or other forms of visualisations (Saunders et al. 2016). It is collected in local settings, covering a sustained time period (Miles et al. 2013) and analysed from an interpretative, impressionistic and symptomatic perspective (Bryman and Bell, 2015). While longitudinal studies enable researchers to observe the change or development of a phenomenon in the course of time, cross-sectional studies are concerned with the analysis of a phenomenon at a specific point of time (Saunders et al. 2016).

Qualitative data is a commonly applied choice within case study and management research as it enables researchers to examine complex phenomena in their natural setting (Miles et al. 2013). In order to understand and analyse the MCS in the case company, a combination of primary and secondary data collection was used. Primary data was collected in the form of semi-structured interviews and workshops. Secondary data was collected in the form of externally available and internally available information about the case company (Saunders et al. 2016). Moreover, existing literature, namely the case studies conducted by Nilsson (2010), Söderlund and Tell (2012) and Jannesson (2016), enabled to add a historical perspective to the study and thus to not only conduct a cross-sectional but also a longitudinal study (Van de Ven, 2007). Some of the historic aspects presented by the above authors were also covered during the primary data collection, which further strengthens the longitudinal argumentations.

The combination of more than one technique for data collection was considered to be necessary in order to fully cover the complex topic of management control in the case company. This multi-method approach increases the depth of the research as it builds on data gained from different perspectives (Saunders et al. 2016; Teddlie and Tashakkori, 2003). Such a cross verification from several sources is also called triangulation and enables a strong substantiation of the research findings, inferences and the trustworthiness of the study (Eisenhardt, 1989; Merriam and Tisdell, 2015; Saunders et al. 2016).

#### *Semi-structured Interviews*

Primary data collected through semi-structured interviews is the main source for the research. This interview technique is commonly used in the context of case study research as it helps to answer both exploratory and explanatory research questions (Saunders et al. 2016).

Semi-structured interviews enable the interviewer to set up a general structure, but then omit or add questions, adjust the order of topics and set the focus in accordance with the flow of the interview (Drever, 1995). Thus, it is possible to combine both, the openness needed to gain an understanding for the complexity of the researched phenomenon, and the comparability of information throughout the organisational structure (Miles et al. 2013). The interview guide can be found in Appendix A.

In preparation for the interviews, an initial meeting with representatives from the case company took place. The meeting ensured on the one side that the research topic is of interest and relevance for Saab, on the other side basic knowledge about the management control activities in the company was gained. Also, a formal contact person from the company was assigned, who had particular interest in the subject field of the thesis and also a suitable role as a Director of Business Development in the investigated BA. The contact person helped to gain access to secondary data and to initiate the contact with the potential interviewees. This support and the gained knowledge was very beneficial in the following interviews to demonstrate credibility, ask specific questions and thus encourage the interviewees to offer detailed information (Saunders et al. 2016; Van de Ven, 2007).

All the interviews were conducted between the end of February and the 16th of March 2018. 15 out of 13 interviews were conducted in English, the other two in Swedish and therefore had to be translated to English. When translating it is important to ensure that the precise meaning of individual words is kept and also groups of words and phrases, in order to minimize the risk of neglecting possible significances (Saunders et al. 2016). This was taken into consideration when translating, and the risk was minimised, as one of the researchers is a Swedish native speaker.

Before the interviews, the interview guideline was pre-tested with the company's representative in order to assess its feasibility. Moreover, a short presentation about the background and the research topic was sent to each interviewee to give them an idea about the content of the research. Depending on the location and availability of the interviewees, the interviews were held either face-to-face or via Skype phone calls. The advantage of face-to-face meetings over Skype phone calls is that the researchers can collect non-verbal information, such as body language and facial expression (Ritchie et al. 2013). It is also argued that it is beneficial to create personal contact in face-to-face interviews (Saunders et al. 2016). However, we tried to address this issue by using the internal Saab Skype account. This helped to build up a trustful atmosphere.

Moreover, it was convenient to share the screen in the Skype phone calls, which enabled the interviewees to show hands-on examples that increased the understanding about certain topics for the researchers.

In agreement with the interviewees the interviews were recorded for later transcription, which enabled to focus on questions and the corresponding answers during the interview (Brinkmann, 2014; Saunders et al. 2016). In addition, notes were made in order to stay concentrated and listen attentively. Later on, the transcripts were sent via email to the interviewees for final checking, which is helpful to ensure the correctness of the data. In certain cases, clarifying questions with regard to the interview were added in the email. However, it was also noted that interviewees tend to change the wording of information or grammar in the transcripts which results from the differences in spoken and written language.

Considering the reliability of the interviews, there is always the risk that the representatives from the case company and the interviewees do not provide the correct or true answer, which could be either intentionally or unintentionally. They might not know better, or they are hesitant to say the truth in order to be in line with socially desired behaviour or to avoid difficulties with their superiors (Saunders et al. 2016). This can be overcome by ensuring anonymity, therefore the interviewees are only mentioned by their position. Additionally, quality checks were made, such as comparing information from different participants of the research or with the help of specific enquiries in the case of conflicting or suspicious information (Miles et al. 2013). Considering the number of interviews, each critical topic was addressed to more than one interviewee, and the repetition of answers was experienced, which is a sign for saturation (Francis et al. 2010). Unclear information was either checked with the help of the contact person from the case company or by checking formal information such as process descriptions, definitions or checklists on the organisation's intranet. However, it was also noticed that certain information differed significantly in the perspective of different interviewees. Thus, the impression that a part of the information was provided in a too bright manner cannot be finally ruled out.

Finally, also researcher errors or biases pose a risk to reliability. Semi-structured interviews require a certain amount of interviewer skills, as it is needed to adjust to the development of the information flow (Brinkmann, 2014; Saunders et al. 2016). The researchers experienced that the quality of the interview increased in the course of the research. Thus, potentially valuable information might have got lost during the early interviews.

Moreover, limited rationality is a common issue in behavioural economics (Kahneman, 2003) and the tendency to subconsciously follow assumptions instead of facts is well acknowledged (Saunders et al. 2016). Despite an interview guideline, different interviewers have different ways to address questions and thus influence the answers and the course of the interview. The same applies for observations in the course of the interview and interpretations of tones and gestures (Ibid.). Following the prepared interview structure and its questions as good as possible limits this risk. Moreover, conducting all interviews in a pair of two and discussing the audio records and the transcripts, as well as comparing the taken notes limit this risk to reliability further (Miles et al. 2013).

### *Workshop*

In addition to the semi-structured interviews, primary data was collected in a workshop at the case company. A workshop in this context can also be described as focus group discussion and is thus a form of non-standardized group interview (Saunders et al. 2016). The number of participants in this kind of interview is not clearly defined as it depends on the complexity of the topic. However, common suggestions lie between four and twelve participants (Hennink, 2013; Saunders et al. 2016). Moreover, a characteristic of the focus group is a clearly defined topic or a defined number of issues, and the aim is to trigger an interactive discussion among the participants (Carson et al. 2001). Hence, the researchers gain a broad view of opinions, perspectives and experiences within a single meeting (Hennink, 2013).

The data collected in focus group discussions differs quite significantly from the data gained in single-interviews. In the course of the discussion the participants share their opinions, they listen to the others and thus they can change or develop their opinions further. Moreover, the setting invites to ask questions that enhance clarity, depth, and detail of the information (Gill et al. 2008; Hennink, 2013). The value of the information gained during the focus group discussion can be increased by purposeful sampling of information-rich participants (Saunders et al. 2016). The researcher can further benefit from the dynamic development of the discussion and from comparing the level of consensus and diversity among the participants (Gill et al. 2008; Hennink, 2013).

For the workshop conducted at the case company the same participants as for the interviews were invited, as well as the contact person from the case company. Hence, the employees were already familiar with the topic and also it was possible to bring together people from different levels of the organisation.

Furthermore, most of the employees had indicated their interest in the research topic during the earlier conducted interviews, which increased the chances of their willingness to participate also in the workshop. Out of 15 sent invitations, eight employees were able to participate, the participants are presented in Table 3.

*Table 3: Workshop Participants*

<b>Participants</b>	<b>Organisational Level</b>
Director Sales and Project Management Processes	Corporate level
Head of Finance and Operational Excellence	Business level
Head of Strategy Function	Business level
Head of Business Unit (small)	Functional level
Head of Business Unit (big)	Functional level
Project Manager (small)	Project level
Project Manager (big)	Project level
Contact person: Director Business Development	Functional level

The workshop took place in a conference room at the case company. This familiar setting aimed to increase a positive atmosphere for the participants (Hennink, 2013). In the beginning of the workshop, the general findings from the interviews were presented in a short presentation and two focus areas for the following discussion were defined. Open questions were then used to dig into each of the topics. As in the earlier interviews, the questions were pre-checked by the contact person of the case company. The Workshop Guide can be found in Appendix B. Including breaks, the workshop lasted three hours. While one of the authors was in charge of leading the discussion of one topic, the other one took notes. The notes were later transcribed into a workshop summary, which was double checked with the contact person. Afterwards, the summary was send to all workshop participants via email.

The focus group discussion was a useful tool to gain additional, in-depth information from different perspectives in a short amount of time. In addition, the method increased the quality of the data as unclear information was discussed in the workshop, and extreme or false views became evident (Gill et al. 2008; Hennink, 2013). In accordance with Hobday and Brady (2000), the workshop was further useful to develop proposed solutions for identified weaknesses in the MCS of the case company. Hence, there were benefits for both theoretical and practical contributions (Van de Ven, 2007).



Despite the benefits of the workshop, the value of this form of data collection might have been limited by the role of the authors. Workshops, or focus group discussions, are typically led by a trained moderator who is skilled to facilitate the discussion in the most valuable way (Hennink, 2013; Saunders et al. 2016). In spite of a careful preparation of the workshop, the lack of moderating experience can have negatively impacted the results. Moreover, the group dynamic might have been influenced by the dominance of certain participants, social pressure or a hierarchical mindset (Hennink, 2013). However, the latter limitations became not obvious during the workshop.

### *Secondary Data*

Secondary data refers to data that was collected for another purpose by someone else than the researcher. Secondary data can consist of raw data or data that has been processed and published (Saunders et al. 2016). Within case studies, the complementation of primary data with secondary data can be beneficial as such data usually covers a broad range of topics that could not be collected and analysed in depth within the limited amount of time (Schutt, 2011).

Sources for secondary data were public information such as data from the company's website and the annual report. Moreover, the company provided internal data such as company presentations, the organisational chart and other documents in the course of the research. Finally, the access to the company's intranet enabled to gather information related to communication, business operations and management guidelines. In terms of reliability, the authors are aware that such data might rather present the ideal than the actual case. Hence, information was progressed with caution and double checked with representative from the company. Table 4 gives an overview of the accessible data.

*Table 4: Secondary Data*

<b>Secondary Data</b>	<b>Content</b>
Annual Report 2017	Comprehensive report of the company's goals and activities throughout the year.
BA Support and Services Presentation	Power Point presentation about the BA Support and Services, its structure, its history, its global presence and its products and services.
Company Website	Provides general information about the company and its field of business.
Execute Business Review	Document about the status of the EB process and current issues.
Execute Business Training Presentation	Training presentation that gives an overview and introduction to Saab's Execute Business.
GMS Document	Word document explaining guidelines for the GMS process EB and MP.
Intranet: GMS Guidelines	Descriptions about Saab's processes on their intranet, including EB and MP.
Organisational Chart	Diagram that shows the organisational structure of the company and the relationships among different elements.
Saab Corporate Presentation	Power Point presentation about the company, its history, its environment and its fields of business.

In addition to the externally and internally available information, three earlier conducted case studies at Saab AB were used to include a historical review of the development of the company. Firstly, Erik Nilsson (2010) conducted a longitudinal study at Saab, focused on strategy, control and competitive advantage. Secondly, Jonas Söderlund and Fredrik Tell (2012) researched about the development of Saab towards a P-form organisation and, thirdly, Erik Jannesson (2016) combined the topics of strategic change and new control practices in his research. All studies took place in the time between 1995 and 2007.

While those studies provide a great help to understand the business of Saab and the development in terms of organisational structure and management control, it must also be said that those studies covered different BUs than the study at hand. Moreover, a continuous restructuration limits the comparability of the situation in 2007 and today. However, the historical review was re-checked with the contact person at the company and it was confirmed that the information are also applicable for the BA Support and Services. In addition, the restructuration has been included in the analysis of the data.

### 3.3.4 Data Analysis

The data analysis started with the transcription of the recorded interviews. Transcripts aim to describe the true conversation in a pragmatic way (Bazeley and Jackson, 2013). In order to ensure consistency, a transcription guideline was used to structure the information (Wellard and McKenna, 2001). The transcripts were re-read by both researchers and complemented with additional notes in case of unclear information. Each interview was saved as a separated file online (Saunders et al. 2016).

In the following the transcribed data was analysed with the help of the computer assisted qualitative data analysis software (CAQDAS) Nvivo11. Therefore, the interview files were uploaded as sources into the software. In the software it is possible to “code” the information into so-called 'Nodes'. Coding is a method to organise data and discover patterns with the help of themes and categories (Bazeley and Jackson, 2013). It enables the structured analysis of large amounts of data and thus helps researchers to gain not only an overview but a deep understanding of the collected data (Auerbach and Silverstein, 2003). Typically, there are two approaches to code data: the deductive approach suggests to apply existing theory to code data, such as the LOC framework; and the inductive approach suggests to start from the scratch and develop own categories in the course of the analysis. Theory then emerges during the process of data collection and coding (Saunders et al. 2016).

Taking on a deductive approach bares the risk of premature closure (Bryman, 2003). Therefore, it was decided to combine both an inductive and a deductive approach to analyse the transcripts (Saunders et al. 2016). Following an inductive approach, the authors firstly went over the transcripts line-by-line together. By making sense of the information and also reading between the lines it was possible to identify the different mechanisms of management control used within the case company. Those were categorised in the Nodes in Nvivo11. Additionally, those paragraphs were coded that explain how management control mechanisms are used to link the different organisational levels, and also comments that pinpoint weaknesses as well as suggestions how to overcome those weaknesses. This micro-analysis triggers discussion about the meaning of different phrases and terms, and it generates awareness of the complexity of the data. Moreover, it helped to overcome preconceptions and instead focus on the actual spoken words (Bazeley and Jackson, 2013). Doing the coding in a pair of two was considered to be very helpful in order to clarify certain passages, and thus increase the accuracy of the coding. An overview of the chosen Nodes, the number of sources and the number of references can be found in Appendix C.

In the second phase of the coding the authors went into each of the Nodes, which then consisted of all paragraphs related to a particular mode of management control. This time, a deductive approach was used by applying Simons' LOC framework (1995b) in order to categorize the modes in accordance with the belief system, the boundary system, the interactive control system and the diagnostic control system. More specifically, the LOC framework for each organisational level was applied separately in order to identify commonalities and differences. The linkages, weaknesses and suggestions were not part of the deductive coding. Thereby, it was noted that some of the mechanisms of management control cannot be clearly allocated into the framework as they cover two or even more levers. Therefore, some of the mechanisms of control were sorted into the predominant lever, others were sorted into two, or even three levers. The overview of the coding separated by organisational level can be found in the analysis chapter five.

The recording and transcribing of the interviews enable researchers to use direct quotes for the following case description and the analysis. This is very helpful as it can support the illustration of key arguments. Moreover, it is a powerful way to convey the richness of the data collected (Saunders et al. 2016). Therefore, quotes were used to describe the control mechanisms used at the case company, and to support significant findings. After recording, transcribing and coding the gathered data it was possible to demonstrate the findings by writing an empirical text, fitted with supporting quotes. In order to make the quoted statements more reader friendly, the spoken words were partly edited in terms of grammar and expression without changing the sense and meaning of the quote. The empirical chapter was then sent to the case company in order for the contact person to check the reliability of the written results.

### 3.4 Research Quality

Research aims to produce valid and reliable findings in an ethical manner (Merriam and Tisdell, 2015). This is supported by a transparent research design that ensures trustworthiness and the overall credential of the thesis (Miles et al. 2013). Therefore, this section is focused on the reliability and validity of the research, as well as further limitations.

### 3.4.1 Reliability

Reliability refers to the consistency and reasonability of the research design (Miles et al. 2013). A reliable study is transparent, reasonable, transferable and free from biases (Saunders et al. 2016). Even though transferability is difficult in the context of qualitative research, the aim should be to be clear in the procedures and thus enable a repetition of the study. Also, it is important to demonstrate that the findings and conclusions are based on the collected and analysed data, and not from preconceptions (Shenton, 2004).

To ensure reliability in the course of the study the decision was made to apply a research design that has been tried-and-tested in the context of business case study research. Also, the roles of the researcher: one internal and one external have been pointed out particularly (Eisenhardt, 1989; Miles et al. 2013). A threat to reliability is further the lack of transparent procedures (Shenton, 2004). To avoid this issue the research design and the choices in terms of sampling, data collection and analysis were reported in detail. Moreover, the data used for the research are explicit in the form audio-records, transcripts, notes and other documents. Thus, it is possible to retrace the research process and conduct a similar study.

### 3.4.2 Validity

The validity of research is concerned with the integrity of the research, its credibility to both the people studied and the readers of the study (Bryman and Bell, 2015; Miles et al. 2013). However, considering the traditional use of validity in the context of quantitative studies, the term itself is questioned among qualitative researchers such as Lincoln and Guba (1985); and Wolcott (1994). Alternative terms for validity in qualitative research include understanding, persuasively written account and credibility. Moreover, authors such as Miles et al. (2013) distinguish between internal validity and external validity.

#### *Internal Validity*

Producing an internally valid research means that authors were able to present the truth in the way that the findings are in line with the reality (Shenton, 2004). In accordance with Lincoln and Guba (1985) researchers can reach internal validity of their work through various ways. 'Prolonged engagement' is suggested as approach to learn about the case company and its culture already before the actual research work starts (Shenton, 2004). As one of the authors has been working in the case company, this prolonged engagement resulted naturally.

The other author gained initial knowledge through the company website, other secondary data and informal talks with employees of the company. Moreover, the initial meeting at the case company was helpful to build up a trustful atmosphere between the parties involved (Shenton, 2004).

Another method to avoid validity issues is triangulation (Miles et al. 2013; Shenton, 2004). As mentioned, triangulation describes the usage of complementary research methods to gain a broad understanding and be able to draw converging conclusions (Miles et al. 2013). This can refer to the general approach of data collection, but also to the analysis of different kind of documents or the selection of participants (Shenton, 2004). Triangulation was applied in the way that both secondary and primary data were combined. Several sources of company-related secondary data were used, as well as a broad range of interviewees who were able to provide insights from very different perspectives of the company. Thus, it was possible to provide content-rich and meaningful descriptions (Miles et al. 2013).

Finally, the validity of the research was strengthened through regular meetings with the contact person at the company, the supervisor of the thesis work and peer students (Shenton, 2004). The questions and discussions in these rounds opened the view for alternative approaches and draw attention to weaknesses in the study design or the logic of the work. Thus, methods got refined and it was possible to strengthen the line of argumentation (Ibid.). Additionally, the frequent communication across boundaries and the engaged relationship between the researchers and the contact person at the case company increased the knowledge of all parties involved and thus made a positive impact towards both theoretical and practical contributions (Van de Ven, 2007).

### *External Validity*

External validity refers to the possibility to transfer findings of one study also to other situations (Merriam, 2009). Some researchers consider transferability in qualitative research as almost impossible, as qualitative research is concerned with specific situations and thus shaped by its unique context (Shenton, 2004). However, authors such as Lincoln and Guba (1985) emphasise the responsibility of researchers to enable transferability by providing sufficient contextual information about the study. Also, Bryman and Bell (2015) point out the importance of choosing representative samples for the research to make transferability feasible.

To provide the reader with sufficient contextual information, it is necessary to fully describe the scenario of the research, such as the persons involved, the setting and the processes, as well as any theory applied (Miles et al. 2013). However, describing a scenario always bears the risk that the writer judges certain information as less important than the reader would do. That information is then unaddressed even though it might be essential in the eye of the reader. Thus, already the scenario description lacks of objectivity (Shenton, 2004). This lack of objectivity is acknowledged and is also valid for the current study. Nonetheless, by describing the case with a certain amount of detail, being open for discussion and feedback, and providing fact-based data either within the text or the appendix of the thesis, this risk was minimised as much as possible.

While on the one side, the scenario description plays an important role with regard to the transferability, on the other side the boundaries of the settings are similarly important (Shenton, 2004). Limits in terms of sample selection, data collection and the time horizon as well as the critical examination of the generalisability of the context are critical for transferability (Bryman and Bell, 2015; Miles et al. 2013). The choice of the case company and the selection of the BA and BUs were made after careful consideration. Also, the selection of the interviewees and the constraints in number due to the limited amount in time were pointed out. Even though the setting is very specific, the framework for the study is clear and thus enables a replication of the study.

### 3.4.3 Limitations

Limitations of the study come along with time constraints in the context of the academic research. These constraints have led to a rather small sampling size. There is a risk that the sampling has been too narrow, instead of considering also the peripherals of the research setting (Miles et al. 2013). Even though the BUs and the interviewees were selected purposefully and the answers were partly repetitive (saturation), a larger number of interviews might have led to additional research findings.

Additional limitations arise from the engaged scholarship approach of the researchers. While it is on the one side beneficial to work closely together with the case company, the engagement also results to a number of challenges (Van de Ven, 2007). The fact that one of the authors has been working for the case company limits the objective perspective. This is strengthened by the close collaboration between the researchers and the case company and the time which was spent directly at the company.

However, the authors were aware of this difficulty and tried to remain a reflective view on the situation at all times. Saab was considered to be a valuable case for the research, but the focus was set on answering the research question in accordance with the academic demands of the university.



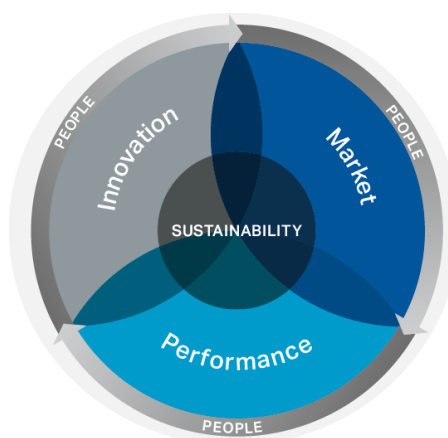
## 4 MANAGEMENT CONTROL AT SAAB

*This chapter presents the case company Saab AB as well as an historical review of the development of MCSs inside the company. Afterwards, the findings of the interviews and the workshop conducted are presented in order to explain the current status of MCSs. A distinction is made between four organisational levels: Corporate, Business Area, Business Unit and Project.*

### 4.1 Introducing the Company

The Swedish defence and aerospace company Saab AB was founded in 1937 with the purpose to secure Sweden's supply of military aircraft. Today it serves the global market with high-technology products, services and solutions from military defence to civil security, with its vision: *"It is a human right to feel safe."* (Saab 2017, p. 1).

Saab works toward this vision by having a mission that is *"To make people safe by pushing intellectual and technological boundaries."* (Saab 2017, p. 1). In accordance with this mission, Saab offers products, systems and solutions that aim to increase security. The strategy of Saab centres around three key areas: performance, innovation and market (see Figure 5). In general, this means to stay close to the customers and work effectively with innovation, but also to take sustainability and the employees into consideration. These areas are of high importance as they lay the foundation for the company's competitiveness. In line with the three key areas, Saab develops long-term targets and the activities necessary to reach them.



*Figure 5: Saab's Strategic Key Areas*

Source: Saab (2017, p. 12).

Saab has operations on almost all continents and to ensure local presence the company has five geographical market areas: Europe, Middle East and Africa, North America, Latin America and Asia Pacific. Additionally, the company offers a wide range of products, applications, systems and solutions, which are divided in the following business operations: Air, Land, Naval, Civil Security and Commercial Aeronautics. These operations are often developed and supplied jointly by several of Saab's six BAs: Aeronautics, Dynamics, Surveillance, Industrial Products and Services, Kockums, and Support and Services. The organisational chart is presented in Appendix D.

The focus of this study is on the last-mentioned BA, Support and Services, which covers 19% of Saab's operations and is structured into several BUs. This area of Saab offers service and support solutions for all the above-mentioned markets. It includes product integration, technical maintenance and logistics as well as products and services for military and civil missions. The BA is structured into six BUs: Aviation Services, Airborne ISR, Gripen Support, Networks and Public Safety, Maintenance Production, and Communication and Tactical Solutions.

## 4.2 Brief History

The historical view on the development of the company's organisational structure and corresponding the development of its MCS are based on three formerly conducted case studies at the company: Nilsson (2010), Söderlund and Tell (2012) and Jannesson (2016). The case studies took place between 1995 and 2007.

### 4.2.1 In the 1990s

In the 1990s the defence industry was typically focused on the national military. Life cycles were long, the competition low and thus the business was stable. Saab's main customer was the Swedish Defence Materiel Administration (FMV), and as Saab had a monopoly position in Sweden the company was able to operate under secured conditions (Nilsson, 2010). Even more, the high interest of the Swedish government in self-sufficiency of defence material led to a strong partnership and a cost-plus contract with the government in production, which means that Saab earned a fixed margin, independently of the production costs. Hence, there was no need to increase efficiency in the operations (Jannesson, 2016).

The organisational structure at that time can be described as a conglomerate, a number of different BUs working mostly separated from each other united under the same company name (Nilsson, 2010). No strategic business plan was in place. Strategic decisions were classified to be secret and thus not communicated (Jannesson, 2016). Management control was executed with the help of financial business plans and budgets on the BU level. There was almost no collaboration between the different BUs (Söderlund and Tell, 2012).

#### 4.2.2 Beginning of the 2000s

Only ten years later the business environment had changed significantly. Budgets for defence got reduced worldwide, and the industry had opened-up for international business. Saab faced a high level of competition in the home market. Moreover, the defence industry was not only concerned with the protection of borders, but also with new challenges resulted from terrorism and nuclear threats (Jannesson, 2016). Among others, these developments required more complex products and services, interconnectedness and network solutions, and the level of uncertainty in the business had increased strongly (Söderlund and Tell, 2012).

The changed environmental conditions also led to changes in the organisational structure and the management control of Saab. The increased uncertainty and the focus on CoPS required more flexibility. Projects that crossed the borders of the BUs became more and more important and were supported by the management (Söderlund and Tell, 2012). Driven by complex, external requirements, the former divisional structure of the company got replaced by a new, border-crossing superstructure in which highly integrated key projects build a strong foundation for Saab's business. The need for cost and time efficient working further helped Saab to develop into a P-form organisation (Jannesson, 2016).

The agile structure of P-form organisations also required a rethink in terms of MCSs (Söderlund and Tell, 2012). Saab established a strategic business plan that helped to guide the direction of the whole company (Nilsson, 2010). Moreover, the company introduced the term 'One Saab' to symbolise the unification of the businesses. This came along with a restructuration of the organisation and increased horizontal control mechanisms that aimed to support the communication and collaborative work between BUs (Jannesson, 2016).

#### 4.2.3 Around 2007

The year 2007 is the last year included in the earlier mentioned studies. Saab had gone through a change process, from an organisation with several separated businesses towards a more unified company (Jannesson, 2016). This can be seen on the development to a P-form organisation and also on the increased level of integrated control mechanisms, which consider both the horizontal but also the vertical integration across the organisational levels of the company. For instance, management tools such as the strategic business plan, the financial business plan and the budget got linked with each other (Söderlund and Tell, 2012). Planning, goals and milestones on the lower levels of the organisation were now developed aligned with the strategic plans of the company. Overall, a harmonised flow of information had been implemented (Nilsson, 2010).

While management initiated this change towards 'One Saab' with the help of a changed structure and management tools, there were also aspects that contradicted this approach. For example, financial incentives were still mainly based on unit results, which did not support border crossing thinking (Jannesson, 2016). Also, the breakdown of the plans from the corporate to the lower levels was not always fully made. That affected the target setting processes for the organisation, and also for the individuals (Söderlund and Tell, 2012). For example, management-by-objectives was a term in place but barely lived in the company. Finally, it had been noticed that particular in the lowest levels of the organisation a number of different management control tools were in place, which created inconsistency and various ways of working (Jannesson, 2016).

#### 4.3 Saab Today

Today Saab is putting a lot of focus and effort in creating profitable growth for the company. They do so by focusing on the three key areas presented earlier: performance, market and innovation. All three areas are important for growth and also competitiveness. However, since 2010 the appointed CEO Håkan Buskhe pays particular attention to the financial targets, and thus the profit and loss responsibility of the BAs und BUs. Firstly, the effort had gone into the improvement of the order intake, which has led to a 41% increase during 2017. Now, the attention has shifted towards performance as he stated “*We need to work hard to ensure that we deliver in our projects as planned.*” (Process Review, 2017, p. 3). It is vital for the company to execute these projects efficiently and deliver with a high quality.

This is also confirmed by a statement of Saab's CFO who points out *"We must increase efficiency in everything we do and most of all in executing our projects."* (Process Review, 2017, p. 4). The need for efficient project execution is not only communicated by the CEO and CFO but also emphasised in the annual report, *"The focus is on continuously making functional processes more efficient, developing, producing and delivering more efficiently in a shorter time to meet customer demand and increase their capabilities, implementing an even more business-oriented culture..."* (Saab 2017, p. 12). This means that the company requires efficient project execution in order to secure a profitable implementation and delivery of captured business.

One step that aims to support these goals was the introduction of the functional transformation programme in 2016. This programme is concerned with a change in the organisational structure of the company. Before the change, supporting functions such as strategy, finance and HR were located inside the BUs, thus within each BU the supporting functions were working separately. With the functional transformation programme, these functions were centralised on the BA level. This means that employees from the supporting functions do not belong to one specific BU any longer, but that they are centralised in competence centres. However, due to a clear allocation of employees to the single BUs the closeness to the business activities is still given. This change in the organisational structure was an attempt to streamline all the organisational functions in order to reduce costs and increase efficiency in the workflow.

In addition to the organisational structure, Saab has made special effort to integrate systems across the organisation, establish common regulations and implement shared tools. This transformation is visualised in Figure 6.

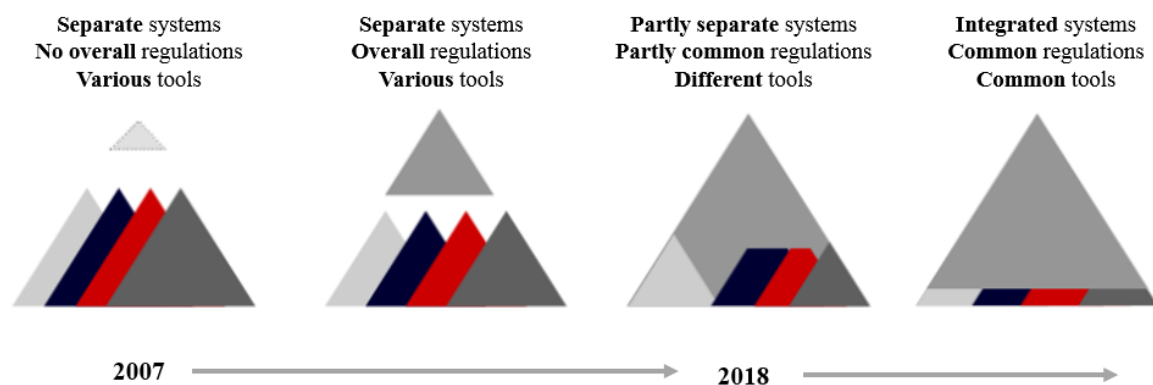


Figure 6: Transformation of systems, regulations and tools

Source: Process Training (2017, p.7).

The following subsections present the most common mechanisms of management control that support the organisation and guide the activities of the employees towards the company's goals. As mentioned, the focus of this study is on the BA Support and Services. Within this BA, two BUs were chosen as sources for the data collection in regards to the control mechanisms that are in place today: one BU that contains large-scale projects with an average contract value of 242 million SEK; and another BU that contains comparably smaller projects with an average contract value of 6.7 million SEK. In consultation with the case company, the names of the chosen BUs are intentionally not mentioned and instead referred to as 'big' and 'small'.

#### 4.3.1 Mission, Vision and Values

Saab states a very clear business concept, connected to its vision, mission and the values of the company. Both the vision based on the human right to feel safe, and the mission to push mental and technological boundaries to reach people's safety are continuously communicated internally and externally, and well known among the staff. Additionally, the values, namely trust, expertise and drive are prevalent when it comes to describe the culture of the organisation. It is pointed out, that such terms need to be phrased in a broad way in order to be able to cover all the different BAs. Hence, it is the task of the management throughout the organisation to translate mission, vision and values into more specific and tangible terms so that everyone can connect it to the daily work.

Particular attention in the early 2000s was paid to the term 'One Saab'. The term is connected to the unification of the business, in terms of both external perception and internal spirit, processes and procedures. While this term was actively communicated from the corporate management level for a couple of years, nowadays the term has lost its presence. The significance of the term differs strongly throughout the organisation. On the corporate level the term is mainly connected to work procedures, it is stated *"'One Saab' means that all Saab works together in a coordinated way. Therefore, we have decided to harmonise procedures and thus work more as one company."* (Director Processes, Corporate).

On the BA level 'One Saab' is considered to be a term that unifies procedure but it also is connected to the teamwork within the company. 'One Saab' means to deal with tasks and problems in a similar way, and *"To talk with one voice."* (Head of Finance, Business). Moreover, the term aims to support synergies and togetherness.

However, it is also questioned by two managers if the term is actually still alive. Another manager points out that there has been a shift in focus when the recent CEO took over his position in 2010, *“We do not communicate 'One Saab' any longer. When Håkan Buskhe came to Saab he focused more on the profit and loss responsibility of every single BU and BA. This makes it more complicated to live 'One Saab'.”* (Business Excellence, Business).

Also, on the BU and project level the term triggers different associations. While some managers state *“‘One Saab’ is meaning a lot.”* (Head of BU big, Function), and further point out the importance of common targets, communication and cooperation, others argue that *“To say that we are going to be 'One Saab' its oversimplifying it. Having a shared mission and vision is essential, but transferring the term to processes and procedures so that everyone is working in the same way is contradictory to the very diverse business Saab is working with.”* (Head of BU small, Function). On the project level it is stated *“For me 'One Saab' means that we have a united front, what we stand for, how we work, our goals and values. My opinion is unfortunately that we have not really exceeded this. Sometimes I think that certain BAs and BUs would like to see themselves as independent and separated from each other.”* (Project Manager 1 small, Project). Hence, the success of the unification of Saab is questioned. Moreover, the term has got a slightly negative connotation: *“The term was also a little bit misused, it became a joke.”* (Project Manager 2 small, Project).

#### 4.3.2 Strategic Business Plan, Financial Plan and Budget

The strategic business plan describes the overall strategic direction for the company in the upcoming years, in accordance with its mission and vision. It covers markets, market developments, key events and product areas. Aligned with this the financial business plan is built on the annual income statements, balance sheet and cash flow for a period of five years. The budget consists of the income statement combined with Key Performance Indicators (KPIs). The budget is set for one operational year. While the business plans are considered to be steering documents for the long-term, the budget is considered to be the steering document from a short-term perspective.

The planning process and thus the creation of the business plans is both a top-down and a bottom-up process. The strategic business plan is created on the corporate level, it sets the framework for the planning of the BAs and BUs. The targets are further broken down into annual sub-targets.

By working with management-by-objectives it is the BA's and BU's responsibility to create specific and measurable goals for the respective operations. Some of them differ among the BAs and BUs, others are common. The targets on the BA and BU level are set based on the strategic business plan, but they also consider realistic market opportunities from their perspective. Then the plans are communicated back to the corporate level where the overall plan is adjusted accordingly. Hence, the strategic business plan is broken down into measurable units and functional dimensions in the BAs and BUs.

Due to its short-term character, the budget consists of the most detailed planning. Particular in the BUs not only the target itself, but also the 'how' is defined with the help of activities and milestones. These are later relevant for the execution of projects and its measurement. A good communication is pointed out to be essential to create realistic projections. While most managers consider the process to be suitable, one manager would like to be more involved into the target setting of his BU.

Targets can be both financial but also non-financial, such as quality or environmental targets. However, across the organisational levels the importance of financial targets is emphasized, *"Because it is all about the money in the end."* (Head of Quality, Corporate). Typical financial targets are sales, gross margin and EBIT. These are prevalent on the corporate and BA level. On the BU and project level there is no common way to set targets, but employees have developed individual target setting procedures. Thus, the balance between financial and non-financial targets differs. However, within both BUs and also on the project level both financial and non-financial targets were explicitly stated. While most managers across all organisational levels point out the importance of the plans and targets, one manager in the BU states *"It is not the plans that are most important, it's the process when you create the plans."* (Head of Section small, Function).

#### 4.3.3 Profit and Loss Responsibility

A profit and loss statement is part of the financial statement of a company and used to assess its performance and financial position. At Saab, this profit and loss statement is prepared across all organisational levels. The managers are held to account for the performance of their area. More specifically, managers are measured on the achievements of the targets within the earlier defined budget. This form of incentive system aims to involve the management personally and creates commitment to the set goals. Even though financial incentives for managers are partly also based on the corporate results, the main impact still stems from the BA or BU results.



Having the profit and loss responsibility for an area also means that managers have the authority to decide for or against investments in their area. Only in exceptional cases, it is possible to make decisions on the corporate level that are mandatory for all BAs. In the context of 'One Saab' and the aim to use common tools and procedures across the company, this means that every BA has to be convinced to invest into unifying systems. For example, it is stated that Saab *“Should strive to have as far as it is possible the same finance system across the organisation, this is very important.”* (Executive VP, Corporate). However, the decentralised history has led to the use of many different tools, or different versions of the same tool. Not only financial tools, but also the Enterprise Resource Planning and the Project Portfolio Management (PPM) tool differ across the organisation. This can create difficulties in the cooperation of different BAs and BUs with each other. The strong focus on profit and loss, which has been introduced with the new CEO, thus partly contradicts the unification of the systems.

Finally, one manager mentioned there have been discussions about the role of project managers in the context of the profit and loss responsibility. Today, the project managers are part of the line organisation and thereby also part of the profit and loss responsibility. In this way, *“The project managers get the bigger picture on what we are doing, they are responsible for profit and loss and they keep the awareness high to create value for the customer and money for the shareholders. An alternative idea would be to create a project office that gathers the specialized project managers, thus the project managers would not belong to the line anymore.”* (Head of Section small, Function).

#### 4.3.4 Global Management System

The Global Management System (GMS) is Saab's management system that defines *“The most cost-effective ways of working.”* (Process Training, 2017, p. 5). Its purpose is to establish common ways of working and ensure that all employees are aware of standards and work in accordance with them. Thereby, the GMS supports the 'One Saab' approach, improves cross-business collaboration, effectiveness and efficiency within Saab. It helps Saab to focus on the creation of value for the customer and speak *“A common language.”* (Head of Finance, Business). Figure 7 gives an overview of the GMS.



*Figure 7: Global Management System*

Source: Process Training (2017, p. 5).

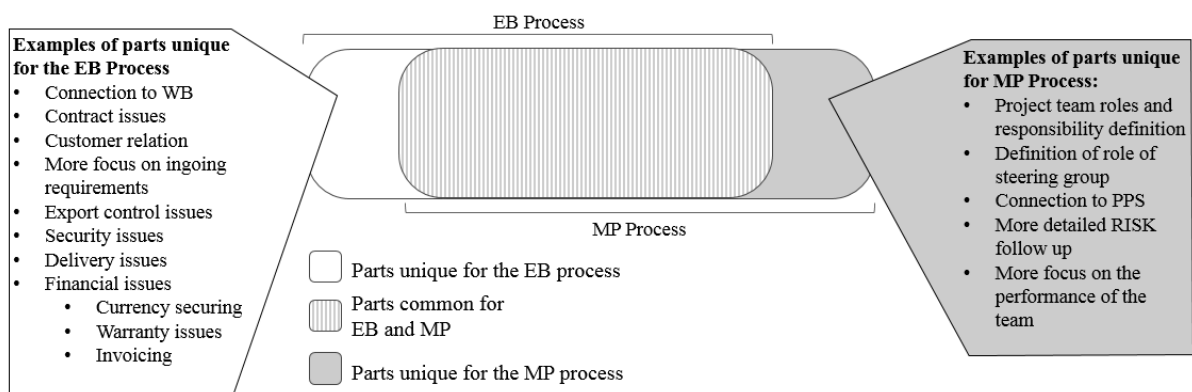
On the top of the GMS is the customer located, together with other stakeholders. These determine the business activities of the company, the products and services developed and offered. How these products and services are offered is described in the third layer, the processes. Resources and governance and organisation build the foundation for all the business activities. The whole pyramid is a dynamic construct, and continuously improved in the course of time.

In the sense of the thesis, the focus of the description is on the processes of the GMS system, particular the processes connected to the execution of projects. There are three main processes dividing the overall business control and monitoring processes of Saab: Develop Business (DB), Win Business (WB) and Execute Business (EB). The DB process gives instructions about how new business is initiated. The WB process gives instructions about a defined sales process and how to secure an overall order intake. Finally, the EB process describes how a customer contract should be fulfilled. Each process is separated into several sub processes. These three main processes have been mandatory for all BAs within Saab since 2011. During the period of implementation, managers were invited to participate in process trainings to learn about the processes. Nowadays, the processes are taught mainly inside the BAs and BUs with the help of superiors and colleagues in a learning-by-doing manner.

In addition to these mandatory processes, there are other supporting processes such as the Product Life Cycle Management process and the Manage Project (MP) process. Some processes, such as the MP process, have been in place already years before the implementation of the GMS. Therefore, they are tried-and-tested and well established among the staff. When it comes to the execution of contracts, there seems to be uncertainty about the EB process and the MP process, particular in terms of roles and responsibilities, documentation and decision points.

### *Processes, Roles and Responsibilities*

Originally, the two processes have very different purposes. The EB process explains how to fulfil a customer contract. The MP process explains how to meet project requirements. If the project is the chosen method to execute a contract, the MP process can become part of the EB process. However, a contract can also consist of a number of projects, or none projects at all. Due to the close relationship of the processes, aspects such as the process flow, roles, support documentation and decision gates are often related to each other. Nevertheless, the processes are not interchangeable but rather complementary. Using just the MP process means to miss important perspectives, such as the customer and supply chain perspective. Figure 8 illustrates the differences between the two processes.



*Figure 8: EB and MP Process*

The main roles when it comes to the contract and project execution are the contract owner and the project owner, respectively the contract responsible and the project responsible. Within the GMS these roles are defined based on a general description, their responsibilities, their authority and the competence profile.

Exemplary, a comparison of the responsibility and authority of the contract owner and the project owner can be found in Appendix E. It becomes obvious, that there are significant differences in the comprehensiveness of the role description. While the contract roles are kept short and unspecific, the project roles are defined in-depth and very clearly. Additionally, extra documents referring to knowledge areas and delegation of staff are linked to the description of the project roles and provide additional support. In a similar manner, the role of the steering group in the course of the contract execution is not defined at all, while there is a detailed role description in the project execution.

All managers are aware of the existence of the two processes, and most of them are aware of the prevalent uncertainty connected to the purpose and usage of the processes. However, the reasons for this uncertainty differ. On the corporate level it is assumed that the EB process better suits bigger than smaller projects, and thus that the EB process is not flexible enough. However, across the BA, BU and project level the process itself is examined to be useful, and it is also described as flexible enough to cover both bigger and smaller projects. So, it is stated *“I think the process is quite flexible. It is possible to tailorise it in accordance with the project specifications. As we have rather small projects, it would be very hard for us to follow the EB process exactly, the administration would be disproportionate, but as it is possible to skip or adjust parts of the process that is no problem. I think it works quite well.”* (Project Manager 1 small, Project).

In terms of roles and responsibilities, there are similarities and differences between the small and the big business. In the small business, the contract owner is typically also the project owner. In the big business, this can be, but does not have to be the case – depending on the number and size of projects involved. In the small business, the contract responsible is typically a project manager. It is argued, that the project manager should be aware of the customer requirements and the contract results. In the big business, it is stated that there is a need to separate these roles as the project manager should not be the same person who is in charge for the customer interactions. In general, there is a lack of clarity with regard to the different roles. Managers on different organisational levels mix up the terms or use other terms such as contract manager while describing the roles and responsibilities. Also, not everyone was aware of the distinctions between the roles.

While the role description seems to be unclear, throughout the organisational levels there is a common understanding when it comes to authority and decision rights. The delegation of authority document describes the assignment of responsibility from a manager to a subordinate.

At Saab, this document mainly is concerned with decision rights within a defined contract amount, and applied from the corporate to the project level. Thus, the delegation of responsibility is an important tool of management control. As one manager phrases it *“That is the beauty of having a clear structure with a clear delegation of authority, everybody knows what their framework and their mandates are.”* (Head of BU small, Function).

While the decision rights of the management seem to be clear, uncertainty is also existing with regard to the steering group. Across the organisation, the role of the steering group as management control tool is considered to be important. However, while some managers emphasise the supporting character of the group in the course of the project execution but point out that the group has no decision rights; others state that the group can make ultimate decisions in terms of project execution, risk and resources. Moreover, the right composition of the group and its commitment to the project is pointed out on different levels of the organisation to be a critical aspect of the project execution.

### *Documentation*

Even though there is a clear separation in the processes between WB and EB, the hand-over should be overlapping and staff in charge of the EB should be involved in the WB activities. Once a contract is finally fixed, a contract directive is the corresponding document that summarizes, among others, the customer requirement, cost ceiling and profit goals, export control topics and delivery specifications. The contract directive is written by the contract owner. It can be created from templates in the according processes. There are two different forms of directives, a complete and a simplified version. The contract owner hands over the contract directive to the contract responsible. The contract responsible then writes a contract plan, in which it is stated how the contract is planned to be executed. The contract plan includes aspects such as time schedule and milestones, delivery plans, contract budget, customer commitments and connections to other internal and external stakeholders.

As part of the EB process, the generation of a contract directive and a contract plan are mandatory for every business executed. However, as most of the contracts are executed in projects, again, also the project process requires the creation of a project directive and a corresponding project plan. This leads to a level of discipline and bureaucratic effort that is judged differently throughout the company. On the corporate level, it is pointed out *“We expect that everyone lives by the business processes.”* (Executive VP, Corporate).

But it is also mentioned *“I am not convinced that the execute business process is working as it should.”* (Head of Quality, Corporate).

On the BU level it is stated *“But if you look at smaller programs ... then you cannot spend too many hours on administration.”* (Head of BU small, Function). This is confirmed by another manager who questions the value of working with both the EB and the MP directives and plans *“If we would strictly follow both process, we would basically do double the work.”* (Head of Department small, Function). On the project level it is stated that *“Often the project manager has to write their own project directive and give it to the project owner, which is not the correct way to do it.”* (Head of Section small, Function). However, in contrast to that, another project manager says, *“The checkpoints are quite similar in both processes, it does not create much more work in the end.”* (Project Manager 1 small, Project).

In accordance with the EB and the MP process, each project should be documented by at least one contract directive and one contract plan, as well as one project directive and one project plan. However, in both BUs it was stated that not all the documentation corresponds to the number of executed projects. In fact, even though all managers are aware of the mandatory character of the documentation in line with the processes, in practice the procedures are not established. One project manager explains, that the reason for this is mainly a time issue, however, it is also partly related to the process. *“The EB process is hard to pre-start if you don't have a contract, but with the MP process you can start earlier, even before you have a contract. So we had some projects that could have had a better execution if someone had appointed a project manager and allowed them to do some planning before the contract was fixed.”* (Project Manager 2 small, Project).

Further, it is stated, that the uncertainty can be located in the phase of the handover from the WB to the EB processes. *“We are supposed to be involved in the WB process. But sometimes it all goes really fast, or the quotation was done several years ago and suddenly a customer order appears.”* (Project Manager 1 small, Project). Another, manager states *“The handover works quite well. But it is here that we are mixing up EB and MP. What we should be doing is handing over the one contract to a contract owner, and then the person should appoint a project manager and also have a directive saying how to execute the contract. But we tend to just follow the EB steps, deliver and have none of the MP process parts administered.”* (Head of Section small, Function).

#### 4.3.5 Measurement and Follow up

In order for the company to keep track and follow the performance of its operations Saab has measurement and follow-up systems in place. In general, the follow-ups and measurements are based on financial targets, such as order intake, EBIT and gross margin; but also non-financial targets such as milestones, time schedule and quality. These targets are then followed-up and measured on project level, within the BUs but also on the BA and the corporate level.

It is to some extent up to the BU and BA to decide how to reach their targets. For example, in 2018 a target document was made in the small BU that states the financial targets of the year, what actions need to be taken in order to get there, who is responsible, what is the time plan, and what particular activities are needed in order to reach the specific targets. One of the managers on that BU also says *"Then we have quarterly follow-ups at our management team meetings, to check our status regarding reaching the requirements for the specific targets. Overall I think it's a good way to follow-up and it works well."* (Head of BU small, Function). Another follow-up is explained in the big BU, *"The product areas are measured, in order to ensure that we are following the business plan, as we are working and cooperating across the borders in different product areas, it is a bit broader and covers several parts of BUs. This is in order to have control over the type of products we are working with. So, the real measurements are within each BU and each BU has to comply with this."* (Head of BU big, Function).

On the project level when executing contracts according to the EB process the main follow-up tool is the Contract Status Report (CSR). This is a monthly report made by the project manager, which summarises and gives an overview of the status of projects. The CSR consists of six fields that cover and review: (1) technical status, (2) financial performance, (3) top five risks, (4) time schedule and milestones, (5) resource and competence, and (6) opportunities. The actual status of the project is then determined by traffic lights that act as a control system: green (under control), amber (high risks for problems), or red (serious problems identified).

One project manager says that it is difficult to decide the traffic lights colour only based on the CSR, but as they have more tools in the project, such as the project's milestones, financial follow-ups, and also the regular meetings, the sum of the tools enables him to determine the status in the report. This traffic light reporting system is appreciated by several managers as a *"Good tool to visualise the status of the project."* (Head of Department big, Function) and *"If it is done correctly it gives a very good overview of the project status."* (Head of BU big, Function).

All CSRs are collected from the BU's projects and merged into a Summary Status Report (SSR) at the BA level, this is then part of the BA's monthly reporting to the corporate level. Thereby, the SSR is the only tool that enables an overview of the sum of the current projects of all BAs. However, as it is based on excel sheets, the data processing is very limited. To improve the basis for the portfolio management Saab has planned to establish a common PPM tool within the upcoming three years. The aim of the tool is to provide an easy platform that summarises the project information from all BAs and BUs, including aspects such as the project status, KPIs and further planning. Moreover, the tool will enable the aggregation and analysis of the project data.

The CSR is also used as a communication tool in steering groups and in the day-to-day business operations. A steering group is generally appointed to projects, which exceed a financial value of 50 million SEK, and its task is to monthly monitor the project execution. However, it should also be considered as a support tool for the project manager. For example, the group can impact decision making, resources and conflict solving and thereby help the project manager to execute projects according to the plans. The members of the steering group vary depending on the size and complexity of the project, but the project manager, contract owner and a financial controller are always part of the group. Other members that can partake are for example the head of engineering or product sales, and also functions such as quality and procurement. However, it is mentioned that *"It is important to have the right people and people with the right commitment and attitude in order to create the right conditions for successful projects. Sometimes, some resources that are put in the steering groups are not aware of what they are supposed to do. Therefore, the training of these groups is highly important."* (Project Manager 2 small, Project).

Additionally, weekly follow-up meetings are common practice on the project level, so-called Pulse Meetings. In these meetings project managers participate alongside with other operating managers, such as quality and technical functions, and have the task to manage the project in terms of resources, risks, time and quality. On higher levels of the organisations, BA and corporate level, there are instead general management meetings covering similar topics. One example is a major project review on the corporate level, which is conducted quarterly. *"Here four to five projects are reviewed by the top management with the aim to monitor the progress of these projects as they have a big impact on Saab's financial situation or are of strategic importance. These projects are typically of strategic importance for Saab."* (Head of Strategy, Business).



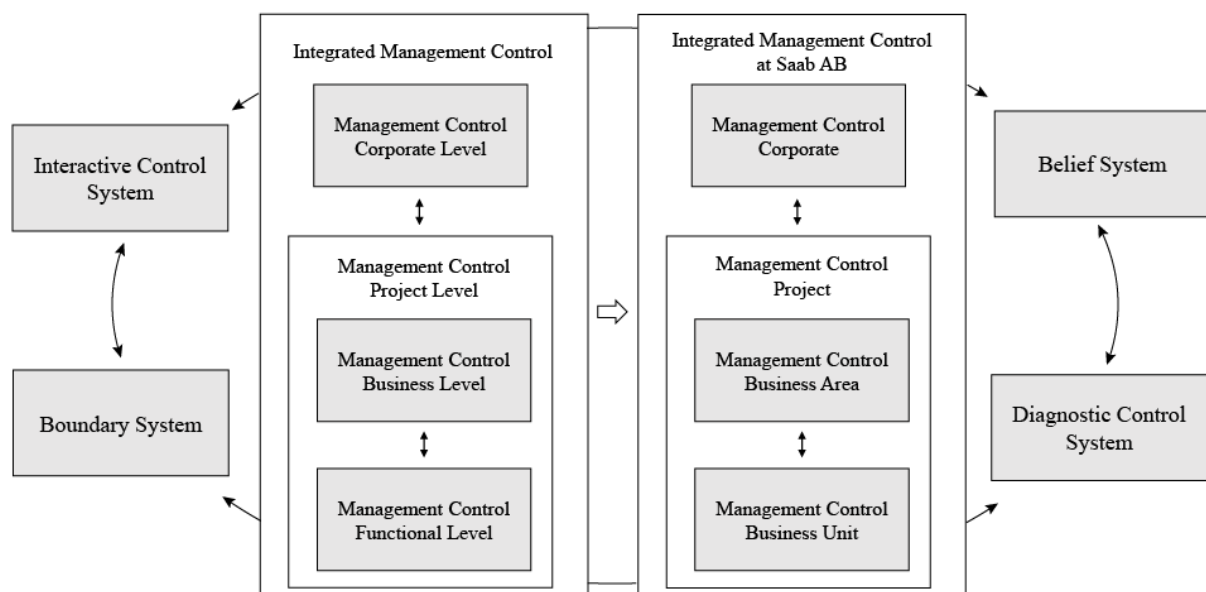
The follow-up and measurements are very different depending on the organisational level, but there are also differences among the different BUs and BAs, *“Some have very process-oriented ways of working, where they follow-up and keep track of their business plans targets; and others not so much.”* (Head of Quality, Corporate). It is also evident that there is limited knowledge about how others are working with the same matters across the organisation *“I do not know how other BAs and BUs are working.”* (Head of Department small, Function). But it is emphasised that *“It is important to have a generic follow-up which is the same for all projects. For example, the time schedule template that we have to monitor the project, many use different tools instead as some projects are very small and others are bigger and therefore need another way to be managed.”* (Project Manager 1 big, Project).

## 5 ANALYSIS

*This chapter presents the analysis of our main findings in relation to the theory presented in chapter two. Following the Levers on Levels model, the empirical findings are analysed from the different organisational levels and with the help of the four control levers. Finally, particular focus is set on the control linkages, which builds the basis to answer the research question.*

### 5.1 Levers on Levels

The Levers on Levels model helps to analyse the four different control levers, namely belief system, boundary system, diagnostic control system and interactive control system on the different organisational levels and pays particular attention to the integration of those systems. In the terms of Saab, this means to analyse the levers of control on the corporate, the BA, the BU and the project level. Figure 9 shows how the terms of the model are transferred into the terms of the case company.



*Figure 9: Levers on Levels at Saab*

In accordance with Kruis et al. (2016), the power of the control levers does not lie in the strength of each lever itself, but rather in the way how they work together, complement each other and thus achieve a balance. Moreover, it has been noticed that a number of control mechanisms (levers) which are used at Saab have the characteristics of more than one control lever in the sense of Simons (1995b). Therefore, control mechanisms at Saab can be assigned to one, two, or even three control levers in the course of the discussion. In the summarising table at the end of each subchapter, the mechanisms are allocated to the most dominant levers of control.

#### 5.1.1 Corporate Level

On the corporate level the strategic direction of the company is set. In the course of time, management at the corporate level has adjusted the strategy of the organisation in accordance with the requirements of the market. Saab has developed from being very locally oriented and secured by the relationship with the FMV to an internationally operating company. The global strategy and the focus on the production of CoPS has become supported by the organisational P-form structure. To benefit from the flexibility of this structure, the corporate management has also started to align its MCS accordingly.

With the mission and vision communicated in documents such as the annual report and the company's website, Saab tries to provide the whole company with a purpose and an inspirational goal to achieve. In accordance with Mundy (2010) these terms are phrased broadly in order to cover all parts of the organisation. However, due to its size and complexity, it is difficult for Saab to implement these terms in ways that are compelling for the variety of BAs. Therefore, it appears reasonable that Saab has established the term 'One Saab' to foster a one-company mindset that binds the sum of the projects together. In accordance with Simons (1995a) a strong belief system creates commitment and a consistent understanding of the core values. Moreover, Simons argues that *"Managers who use their mission as living documents ... have discovered a powerful lever of control."* (Simons 1995a, p. 82). Considering that the term 'One Saab' has not actively been communicated in recent years anymore and therefore faded into the background, it can be questioned if Saab is missing out to benefit from a strong control lever.

Instead of strengthen the belief system, the boundary and diagnostic control system have been more set into the focus. Strategic planning, financial planning and budget setting are considered to be some of the most important control mechanisms.

They fulfil both the characteristics of boundary and diagnostic control: on the one side, these planning mechanisms are used to guide the direction of projects towards defined goals and targets; on the other side, these goals and targets can be used as points of measurement later on. This development is in line with literature, as it is argued that more complex environments as well as complex organisational structures lead to a higher focus on boundary and diagnostic control systems (Hobday and Brady, 1998; Marginson, 2002). In order to limit the risk of failure, managers apply formal control systems to ensure that boundaries are clearly communicated and understood. Diagnostic control systems further ease monitoring in large scale for managers (Simons, 1995a).

So far, the only coherent overview of the sum of projects from all BAs is available in the form of the collected SSR reports. Based on excel sheets, the informative value of these reports is limited through the features of this spreadsheet. In accordance with Hobday (2000a) increased organisational complexity leads firms to search for opportunities to simplify procedures in order to make the complexity manageable. In this sense, Saab has planned to implement an overarching PPM tool, which enables an easy access to project data in various forms. This would enable both the overview of the data and the possibility to process and analyse the data, and thereby strengthen Saab's portfolio management (Andersen and Jessen, 2003; Meskendahl, 2010). However, due to the profit and loss responsibility of the BAs, this form of diagnostic control can only be implemented if all the BAs take the decision to invest in this tool. This means that even though the tool is considered to be valuable in general, the financial situation of certain BAs might not enable them to invest in the tool and thereby limit its usefulness.

While diagnostic control is an appropriate system for the implementation of strategies, interactive control rather draws attention to strategic uncertainties (Simons, 1995b). By involving both upper and lower management in the process of planning, Saab ensures communication and thus is able to develop flexible plans. Moreover, interactive control is executed on the corporate level with the help of management meetings. In these meetings the progress of those projects is discussed, that are of such a scale that the performance directly impacts the overall business results. Even if not directly involved in the project execution, the corporate level thereby keeps track of the project progress. Therefore, management meetings can be seen as diagnostic control as they observe and thereby measure the project progress, the interaction among the managers involved and the discussion around the projects also fulfil the requirements of interactive control.

Another form of management control is the implementation of the GMS. As explained by Nilsson and Rapp (2015), the internal structure of a company, consisting of its organisation, MCS and processes, must be aligned with the external conditions the company is working in. Accordingly, the GMS has been implemented from the corporate level and supports the idea of 'One Saab' in the form that it sets corporate-wide standards and guidelines for work procedures, but it also encourages interaction among employees. Focusing on the process, the GMS mainly defines working procedures and thereby sets boundaries to the work activities. However, as the processes also define milestones and ensure interaction among employees for example with the help of steering group meetings, the GMS covers three forms of control systems: boundary, diagnostic and interactive. Due to its customer orientation and its connection to policies and values, it could even be seen as a belief system. However, as the processes within the GMS are in the focus of the analysis, this perspective is not prevalent.

Overall, on the corporate level of the organisation the management applies a mix out of all the four control levers. In contrast to Simons (1995b) who points out the importance of the belief system in uncertain environments and to create sense and commitment, the belief system at Saab is existing, but is not emphasised from the management. However, its broad formulation enables to cover all BAs. The management control focus is on boundary and diagnostic control systems, which creates a framework that guides the middle and lower management in their daily work. In accordance with Söderlund and Tell (2009) the corporate level thereby provides a permanent structure for the diverse projects of the company and establishes unifying processes. This is in line with the characteristics of P-form organisations in which responsibility is directed downwards. Also, this supports the idea that projects are temporarily decentralised units within the organisational structure of standardised processes and procedures of a company (Canonico and Söderlund, 2010; Clark and Wheelwright, 1992). Table 5 provides an overview of the main control levers at the corporate level.

*Table 5: Control Levers at the Corporate Level*

<b>Control lever</b>	<b>Control mechanism at Saab</b>
Belief System	- Mission, vision and values
Boundary System	- Strategic Business Plan - Financial Plan - Budget - GMS
Diagnostic Control System	- Strategic Business Plan - Financial Plan - Budget - GMS - Management Meetings - PPM
Interactive Control System	- Management Meetings

### 5.1.2 Business Level

The business level at Saab consists of the six BAs. Despite united under the same corporate strategy, the BAs are concerned with very different types of businesses. Therefore, the managers on the business level have the crucial role to establish a unifying identity that supports the own business, and also supports the one-company thinking. On the business level, managers see the need to strengthen this one-company thinking, at the same time, it is argued that other control mechanisms work against this approach.

Unifying control levers at Saab are the mechanisms of the belief system, common plans and the GMS. The managers on the business level thereby have the role of a middleman, as they are supposed to translate the message sent from the corporate level into their own BA. In the same way, they communicate plans and information from the lower levels to the corporate level. This is in line with Marginson (2002) who points out the importance of the middle and lower management levels for the strategy formation. However, these unifying approaches contrast the strong focus on profit and loss at Saab. Each BA is responsible for and measured by its own business results. This means, that investment decisions are made by the BA, for example in terms of common IT systems. Thereby, the chances to benefit from shared software gets limited (Rom and Rhode, 2007). Moreover, incentives for managers are partly impacted by the BA results. This bears the risk that decisions are not made in the best sense of the organisation, but rather in the best sense of the own business (Merchant and Van der Stede, 2012). Hence, the BAs are still working quite separated from each other.

While management on the corporate level was very little involved in the project execution, this involvement is higher on the business level. This results from both a change in the organisational structure and the management control mechanisms. The functional transformation programme has bundled expert resources on the business level. This supports the P-form organisation in that way, that expert knowledge can be distributed more flexible among both BAs and BUs and into the projects. Moreover, the experts from these competence centres are often involved in the steering groups and can thus directly impact the progress of projects. The interactive use of diagnostic control (steering group) enables flexibility in uncertain environments (Henri, 2006), which are typical for CoPS producing companies. However, the uncertainties about the responsibilities and composition of the steering group at Saab limit its strength. In accordance with Cooper (2008) steering groups that decide about the progression of projects which are not skilled enough or equipped properly to fulfil their task, bear the risk to support lacking projects and thus can create financial damage for the company.

The basis for the discussion in the steering group meetings is laid by the CSRs, which can be considered as boundary system as the template provides a framework for data; and as diagnostic control system at the same time as it measures progress. This form of reporting is a way for the upper management to keep track of the developments of the projects even though the personal contact between the different organisational levels is decreasing in accordance with the growth of the company (Mundy, 2010). While the CSR is discussed frequently in the steering meetings, and thereby becomes partly interactive, the sum of the reports (SSR) is rather used as a one-way communication mechanism. It informs managers on the BA level about the project progress, feedback with regard to the SSR is rarely. Considering that this mechanism is the only summary of the projects available, it can be questioned if more management attention would have a positive effect on the performance. This would be in line with Canonico and Söderlund (2010) who point out the importance for P-form organisations to have an overview of their projects and thereby be able to manage the portfolio of its projects in accordance with the strategic direction of the company.

Overall, it can be said that on the BA level at Saab the former business structure of a conglomerate is still noticeable. Similar as on the corporate level, the belief system is not emphasised. Due to the differences among the BAs and the clear profit and loss responsibilities, the impact of mission, vision and values for the daily project work might even be weaker compared to the corporate level's belief system. However, diagnostic control systems such as the GMS, and the CSR and SSR support common work procedures and collaboration.

Particular for project-based companies, these kinds of shared processes are important in order to link the activities within the company and establish routinized, efficient work procedures despite the different characteristics of projects (Gann and Salter, 2000; Ray et al. 2004). Moreover, it enables organisations to learn continuously and to develop profound project management capabilities (Canonico and Söderlund, 2010). Table 6 provides an overview of the main control levers at the business level.

*Table 6: Control Levers at the Business Level*

<b>Control lever</b>	<b>Control mechanism at Saab</b>
Belief System	- Mission, vision and values
Boundary System	- Strategic Business Plan - Financial Plan - Budget - GMS - CSR and SSR
Diagnostic Control System	- Strategic Business Plan - Financial Plan - Budget - GMS - Profit and Loss Responsibility - Steering Group Meetings - CSR and SSR
Interactive Control System	- Management Meetings - Steering Group Meetings

### 5.1.3 Functional Level

The management on the functional level fulfils on the one side similar tasks as on the business level, but is on the other side even more involved in the project execution. Similar management control levers are related to the belief system. Again, it is the manager's task to translate the message from the belief system into more explicit terms. Also, the strategic planning and budgeting takes place in a similar way and the GMS provides the standardised working procedures for the business execution. However, as the functional level is providing the projects with resources they are much more involved in the project execution, and they are working more closely with the processes of the GMS.

While the processes are supposed to help the managers in their work and make activities more efficient (Gann and Salter, 2000; Ray et al. 2004), on the functional level at Saab it can be seen that such processes can also lead to rigidity and misunderstandings.



This is in line with Canonico and Söderlund (2010) who argue that companies have the tendency to increase efficiency with increased control mechanisms, which contrasts the flexible characteristics of P-form organisations. However, while it could be assumed that rigidity and misunderstandings are a result of a lack of flexibility and adaptability of the processes, a common problem in stage-gate processes (Cooper, 2008), at Saab the cause for the difficulties is rather in the implementation and clarity of the processes, its purpose, roles and responsibilities, and documentation. Employees are not aware of the differences among processes, and the way how they are deployed. Such uncertainties can directly impact the success of projects negatively (Morris and Jamieson, 2005).

Another management control mechanism that plays an important role on the functional level is the delegation of authority document, which can be considered as boundary system as it sets limits to decision rights. This document supports the P-form organisation as it hands over responsibility to lower management (Lindkvist, 2004). Thereby, managers have the authority to handle contracts in a flexible manner, which is in line with the temporary decentralised character of project work (Sydow et al. 2004). Nonetheless, while managers gain authority on the one side, they also carry the profit and loss responsibility on the other side. As on the business level, the profit and loss responsibility might lead to gamesmanship and rather encourages separation than cross-border collaboration (Merchant and Van der Stede, 2012).

Management mechanisms on the functional level further become more boundary and diagnostic because employees from the functional level are either working on the interface between function and project, or they are directly part of the project work. As argued by Simons (1995b) companies that are working decentralised focus more and more on formal processes in order to establish clear boundaries. Even though the interface between functional and project work is defined in the processes at Saab, it is not always clear for the employees in the daily work. Clear communication and interaction is essential to trigger learning and thus make the control systems better understood (Martyn et al. 2016; Mundy, 2010; Simons, 1995b).

Nonetheless, despite the uncertainties with regard to the processes, the closeness to the project execution also leads to an increase in interactive control mechanisms. Employees from the function are supporting the project groups, they are involved in steering groups and have regular interaction with the project teams. This close relationship creates togetherness and commitment which not necessarily is connected with the belief system communicated by the corporate level. Instead, something as a functional spirit is in place, that is beneficial for the teamwork and thereby for the work in the unit, but at the same time it might contradict with the search of synergies between functions and the one-company thinking.

The separation between the BUs can also be tracked by the way how business plans are broken down into BU goals and targets. While the approach is quite coherent on the BA level, on the BU level many different tools are applied, ranging from SWOT to Balanced Scorecards. This can be seen as a result of the increased autonomy and responsibility of lower management (Martyn et al. 2016) but it also supports the assumption that a strong decentralisation and loose coupling might lead to difficulties to build up shared knowledge bases (Lindkvist, 2004). This is particular critical for CoPS producing companies, which are highly reliable on the knowledge and the skills of its employees (Hobday, 2000a). Table 7 provides an overview of the most applied control levers at the functional level.

*Table 7: Control Levers at the Functional Level*

<b>Control lever</b>	<b>Control mechanism at Saab</b>
Belief System	<ul style="list-style-type: none"> <li>- Mission, vision and values</li> </ul>
Boundary System	<ul style="list-style-type: none"> <li>- Strategic Business Plan</li> <li>- Financial Plan</li> <li>- Budget</li> <li>- GMS</li> <li>- Delegation of Authority Document</li> <li>- Contract Directive / Contract Plan</li> <li>- Individual steering tools</li> </ul>
Diagnostic Control System	<ul style="list-style-type: none"> <li>- Strategic Business Plan</li> <li>- Financial Plan</li> <li>- Budget</li> <li>- GMS</li> <li>- Profit and Loss Responsibility</li> <li>- Steering Group Meetings</li> <li>- CSR and SSR</li> <li>- Contract Directive / Contract Plan</li> <li>- Individual steering tools</li> </ul>
Interactive Control System	<ul style="list-style-type: none"> <li>- Management Meetings</li> <li>- Steering Group Meetings</li> </ul>

#### 5.1.4 Project Level

Even though supported from other levels, the project level is directly responsible for the execution of complex projects. Thereby, one of the biggest challenges for P-form organisations is to balance firmness and flexibility, so that the project benefits from formal processes and at the same time gets the chance to flexibly adapt in accordance with internal or external developments (Tatikonda and Rosenthal, 2000). Similar to the earlier described levels, Saab applies also on the project level a mix of all the four control systems. However, it can be noticed, that the number of control mechanisms overall increases simultaneously with the involvement of employees in the project execution.

The P-form organisation of Saab and the huge differences in project scale and scope, does not make a clear allocation of the project level in the organisational structure possible. While small projects can be part of a single BU, other projects are as large that they cross several BAs. This is also the reason why defined roles and the corresponding responsibilities, such as the contract owner and the project owner, can differ between projects. Sometimes, it is reasonable to combine roles. Other times, it is reasonable to have a number of project owners within one contract. Despite a definition in the GMS, the uncertainty about the roles makes the borders between functional work and project work blurry, which impacts the performance of projects. This is supported by Morris and Jamieson (2005) who emphasise that the implementation of strategy through processes and procedures requires personal expertise and clearly defined roles, responsibilities and accountabilities.

In a similar manner, it can be argued that P-form organisations require a strong set of boundary and diagnostic control systems in order to avoid the risk that projects become too autonomous and work against the organisation's strategy (Canonico and Söderlund, 2010). Moreover, these systems support the monitoring of the project progress and enable managers to intervene in due time (Vanhoucke, 2014). Saab does have such control mechanisms in place, and they are considered to be flexible enough to match the different requirements of different complex projects. However, they are not applied accordingly, as can be seen in the uncertainties of the EB and MP process, and the lack of documentation. To support the employees in the application of the mechanisms available, leadership skills play an important role. Particular project settings that are characterised by uncertainty and dependency, require the involvement of managers in order to strengthen interactive control (Dahlgren and Söderlund, 2010).

Clark and Wheelwright (1992) explicitly point out the need for strong and independent leadership skills in order to overcome the challenges of project work. Such leaders act as communicators and multifunctional translators, and they are able to create commitment among the project team (Hobday, 2000a). Thereby, they are able to balance the project interest with the overall interest of the company.

This commitment is typically created with the help of the belief system (Marginson, 2002; Simons, 1995b). On the project level at Saab, the company's belief system is not dominant. Some employees even point out that they miss a project spirit around their daily work. This makes it difficult for project managers to streamline the capabilities of their team, deal with uncertainty (Acha et al. 2005; Hobday, 1998) and establish a clear direction that guides the project towards the company's goals (Clark and Wheelwright, 1992). Hence, projects do not realise their full potential and are working rather separated from the rest of the organisation.

This separation can also be seen in the number of different monitoring tools that are used on the project level. Instead of having common standards, or share best practices, many managers have invented their own ways to measure and monitor. The reason for this can partly be the organisational structure. Typically, the autonomous way of working in projects makes learning economies more difficult in P-form organisations (Hobday, 1998). Additionally, the lack of focus on the belief system on the upper management levels mirrors down to the project level where the managers do not feel forced to emphasise this mode of control either. By not strengthen the control mechanisms that enable employees to cooperate and coordinate within and across organisational boundaries, a company misses out the chance to do both exploit existing knowledge and explore new possibilities (Söderlund and Tell, 2009).

Overall, it becomes evident, that Saab has a number of different management control tools in place that aim to support the execution of complex projects. However, the way the tools are implemented and used partly contradicts the requirements of a P-form organisation. For instance, boundary and diagnostic control are quite strong due to the GMS. Nonetheless, the employees do not know how to apply the mechanism in an efficient way, which speaks against its purpose. Having standardised processes suits stable environments, but in P-form organisations these mechanisms must be complemented with belief and interactive control systems (Dahlgren and Söderlund, 2010).

In contrast to the GMS, the measuring and monitoring of the project progress is lived interactively with the help of the CSR, steering group and pulse meetings. The traffic light system that indicates the status of the project is considered to be a useful tool to simplify deliveries and thereby eases the reporting. Accelerating gate decisions in this way supports the implementation of flexible processes, while at the same time bears the risk to oversimplify and thereby miss out critical developments (Cooper, 2008). Therefore, interactivity that triggers discussion, enables quick problem solving and monitors progress is highly important and positively impacts the overall project success (Hobday and Brady, 1998). Table 8 provides an overview of the main control levers at the project level.

*Table 8: Control Levers at the Project Level*

<b>Control lever</b>	<b>Control mechanism at Saab</b>
Belief System	- Mission, vision and values
Boundary System	<ul style="list-style-type: none"> <li>- Strategic Business Plan</li> <li>- Financial Plan</li> <li>- Budget</li> <li>- GMS</li> <li>- Delegation of Authority Document</li> <li>- Project Directive / Project Plan</li> <li>- Individual steering tools</li> </ul>
Diagnostic Control System	<ul style="list-style-type: none"> <li>- Strategic Business Plan</li> <li>- Financial Plan</li> <li>- Budget</li> <li>- GMS</li> <li>- Profit and Loss Responsibility</li> <li>- Steering Group Meetings</li> <li>- CSR and SSR</li> <li>- Project Directive / Project Plan</li> <li>- Pulse Meetings</li> <li>- Individual steering tools</li> </ul>
Interactive Control System	<ul style="list-style-type: none"> <li>- Steering Group Meetings</li> <li>- Pulse Meetings</li> </ul>

### 5.1.5 Control Linkages

After analysing and outlining Saab's different mechanisms of control on the organisational levels it is now time to identify the control linkages between these levels. In other words, how Saab uses their control mechanisms to connect and align the control on the different organisational levels, in order to create integrated control.

Several authors have highlighted the importance of having effective linkages across the levels as it increases the performance when executing business (Langfield-Smith, 1997; Sydow et al. 2004). Having integrated control fosters transparency and supports decision making (Nilsson and Rapp, 2005), alongside with an efficient flow of information and knowledge sharing within organisations (Jannesson et al. 2016). These are prerequisites for P-form organisations in order to be able to make business in uncertain environments and successfully execute complex projects.

### *Belief System*

To begin with, Saab's belief system such as vision and mission is kept rather general in order to capture all of the organisations different business operations. The belief system is on the corporate level clearly defined and documented, for example in the annual report and on the company's website. However, it is not actively, verbally communicated in the organisation. It is the task of the middle and lower management to translate mission, vision and values throughout the organisation and thereby ensure that the projects are working in accordance with the strategy of the company (Canonico and Söderlund, 2010; Clark and Wheelwright, 1992). Hence, the strength of the belief system and thus the control linkage between the corporate level and the lower levels depends on the ability of the managers to communicate the corporate's statements. In the case of Saab, it is evident that depending on the manager the belief system is translated and communicated differently. While some managers say, mission, vision and values are directly impacting the daily project work, others do not see that these definitions are relevant for the project execution.

In addition to mission, vision and values, Saab has implemented the term 'One Saab'. However, as mentioned earlier, the term has become relatively vague. The corporate level was actively communicating the term for a couple of years, but nowadays it seems as it has lost its presence. Nonetheless, since Saab's business is built on projects that cross the boundaries within the organisation and require the integration of complex systems, it is important to create a common ground so that all employees are working hand-in-hand and towards a shared goal. A strong belief system would be supportive to ensure that the projects are not working autonomously but in the best interest of the whole organisation (Canonico and Söderlund, 2010; Clark and Wheelwright, 1992; Mundy, 2010). This is particularly important for P-form organisations as they are working cross-functionally and in temporal project structures (Söderlund and Tell, 2009).

Therefore, it is important to emphasise 'One Saab' on the project level in a way that supports the unity of the whole company. In order to reach the project level with this message, it has to be actively communicated from the top and all the way through the business and functional level to the project workforce. By putting the company's values into everyday practice, upper managers can set an example that will also affect the behaviour and communication of the middle and lower management (Mintzberg, 1989). In this way, it is possible to build a strong control linkage that is coherent with the strategic agenda and guides into the same direction even though those terms are kept rather broad (Mundy, 2010).

### *Boundary System*

When it comes to the boundary system such as the strategic business plan and financial budget it is identified as both a top-down and also a bottom-up process. Most of the plans are created on the corporate level and then broken down to the BAs and BUs. In the process of breaking them into targets the lower levels of the organisation can give feedback and adjust some of the plans, for example the budget for that specific BA. By doing so and involving employees in the process of planning, managers gain valuable insights and knowledge that can support strategic decision making in the future (Mundy, 2010), and those plans build a strong control linkage that connects the sum of small and bigger projects with the overall goal of the company. Moreover, this linkage gets even stronger due to the involvement of the managers who can impact the boundaries for their own area, which leads to acceptance of the plans and a higher commitment to reach the goals set.

Another boundary system that builds a strong control linkage among the organisational levels and particular the project work is the GMS. The GMS sets the framework for all the business activities of the company. Mandatory, shared working principles and procedures, a unified terminology and defined interfaces create a common ground in an environment that is dominated by cross-functional project work. Thereby, it forms a 'glue' that links the intra-organisational activities of the organisation together (Gann and Salter, 2000). The challenge of these kind of control mechanisms lies in its flexibility (Simons, 1995b). Standardised processes can provide a helpful guideline to work in uncertainty (Cooper, 2008). Additionally, it enables continuous learning and thus improves efficiency. At the same time, it bears the risk to contradict the flexible P-form organisation as they can be too structured, controlling and loaded with paperwork (Ibid.).

To create a strong linkage, the processes must both provide helpful guidelines and boundaries, and also be agile, lean and accelerating enough to meet the requirements of the versatile nature of complex projects (Cooper, 2008; Gann and Salter, 2000).

### *Diagnostic Control System*

Saab's diagnostic control system partly links the organisational levels with each other, partly it works contradictory. Clear linkages can be seen in the coherency in planning, measurement and follow-up, particular in terms of financial aspects. The breakdown of targets into measurable KPIs and milestones builds a strong connection between the levels. The application of the same performance indicators in different areas makes results comparable. Moreover, while the number of the performance indicators and milestones on the corporate level is rather limited, the number increases on the lower levels, which enables the managers to gain a deeper understanding of the results. This is supported by the application of the CSR and SSR reports, which set a common framework for the measurement of project progress, but at the same time enable adjustments and explanatory comments that can be included in case the numerical information requires additional explanation.

The steering group meetings further strengthen the control linkages between the levels as employees from the different levels talk about and discuss the project progress together, with the CSR reports as a basis. This form of two-way communication links the different levels of the organisation (Mundy, 2010). Similar, Henri (2006) points out that the interactive use of diagnostic control creates positive tensions, which help companies to stay flexible in uncertain environment.

While the standardised reporting, measurement and follow-up is an effective mechanism that enables the monitoring of projects and links the levels of the organisation, they are still kept rather broad. The in-depth look into the functional and project level shows that managers measure more than just the data required in the CSR. The tools used to measure these additional data differ strongly, which enables the managers to adjust their measurements to the characteristics of their projects. From a broader perspective, this means that projects are working with very different performance indicators: some are very much finance-oriented, whereas others pay attention to the balance between financial and non-financial aspects.



It can be argued, that this kind of freedom supports the purpose of project work as it enables flexibility within the frame of defined work procedures (GMS and CSR), but it can also be argued that this individualistic approach leads to a lack of cross-project learning and building of organisational capabilities (Brady and Davies, 2004).

This individualistic approach of measurement can not only be found in the lower levels of the organisation, but the mindset is still prevalent across all the organisational levels. Driven by the historical background of the company, the profit and loss responsibility and incentive systems that are mainly based on the results of the own field of business, managers still have a tendency to act in their own, not always in the company's best interest. This imbalance in control mechanisms sets wrong incentives for managers and thus bears the risk to weaken the performance of the company (Merchant and Van der Stede, 2012).

#### *Interactive Control System*

Lastly, almost all the above-mentioned mechanisms can be used interactively and thereby strengthen the connection between the organisational levels through discussion and dialogue (Mundy, 2010). The belief system is based on the formally written statements of the company, but it only makes an impact on the project work and the collaboration among the employees if it is lived exemplary from the top management to the lower level managers. Similar, it is important to have boundary and diagnostic control systems such as the planning and budgeting, and the GMS in place, but to execute complex projects, it is not possible to just blindly follow these guidelines. The interactive use of these mechanisms is essential to foster communication (Dahlgren and Söderlund, 2010; Simons, 1995b), and thereby to create strong control linkages among the levels.

At Saab, interactive control is lived with the help of management and steering meetings, which directly impact the project success. However, some mechanisms such as the SSR are rarely used interactively. It can be questioned if more management attention could strengthen the project portfolio management. So far, it appears that every BA plans and coordinates their project programme, which in sum results to the company's project portfolio, but no active project portfolio planning for the whole company can be identified. Nonetheless, it is likely that the planned PPM tool will provide the company with better technical conditions that support such a project portfolio management.

In conclusion, Saab is having clear control linkages among the organisational levels in terms of boundary and diagnostic control. However, partly, the diagnostic control also works against the one-company thinking. To take advantage from these linkages, and avoid negative effects from separating mechanisms, such as the profit and loss responsibility, these control linkages must be complemented with strong belief and interactive control systems. Thereby, interactivity plays an essential role as it has a strong impact on the efficiency of all the other control levers (Henri, 2006; Kruis et al. 2016).

Management support, attention and communication help to make the best out of the mechanisms in place, and also to benefit from its flexibility and establish continuous improvement (Mundy, 2010). Interactivity can be fostered with the help of management policy statements or mandatory meetings (Simons, 1995), however, the case has shown that in the same organisational setting the abilities of the managers and their leadership style can also have significant impact on the effective use of interactive management control.

## 5.2 The Interplay of Control Levers

Control levers across the organisational levels play a crucial role in the execution of complex projects (Fisher, 1995; Sydow et al. 2004). The analysis of the different levels of the organisation and the linkages among each other have shown that P-form organisations apply different kind of control mechanisms in order to integrate projects in the organisational structure of the company and enable a successful execution of complex projects.

In order to answer the research question *“How do P-form organisations use control linkages to integrate levers of control across the organisational levels?”* it is important to firstly understand the level structure of the organisation, in this case, the four levels corporate, business, function and project. Despite unified in the same company, the different levels also partly work against the flexible project structure of P-form organisations. To overcome this challenge, a balance of control levers must be in place on the horizontal (on each level) and also on the vertical (the linkage) of the organisation.

Beginning with the balance of levers on each level, it needs to be considered that managers on different levels have different roles and correlated tasks (Fisher, 1995). Therefore, they also apply different control mechanisms. On the corporate level, managers have the chance to set the basis for a strong MCS that fits the corporate strategy and supports the activities of the employees from the top to the workforce (Simons, 1995b).

Diagnostic and boundary control help to delegate responsibility, and ensure the freedom of decentralisation within the boundaries of a unified company. However, especially important on the corporate level is the use of the belief system in order to create a unifying vision and a shared goal. Both must be broad enough to cover all the different BAs in the company, and also compelling enough to create commitment. Moreover, with the help of the interactive control system, managers on the corporate level must support their statements with actions, and foster openness and communication. Hence, they must establish a common framework for collaboration and knowledge transfer.

The business and the functional level in P-form organisations take over an important role as they are responsible to link the projects to the organisational goals (Canonico and Söderlund, 2010; Clark and Wheelwright, 1992). They must translate the organisations' belief system into their BAs and BUs and enable the diverse areas to develop a way of working that suits their field of business. At the same time, they must ensure common work procedures and support learning across the organisation by applying diagnostic and boundary control interactively. As the case has shown, an imbalance of control levers on an upper level is likely to be transferred to the lower levels of the organisation and thereby directly impacts the project level as well. Depending on the control lever missing, this imbalance can partly be compensated by good leadership skills on the middle management, however, as higher in the hierarchy the imbalance is located as higher is the risk to negatively impact projects in large scale.

The project level is crucial for the execution of projects and thereby for the business success. On this level, managers are concerned with the task to efficiently handle the complex projects, and take business decisions in the best interest of the company. The increased number of boundary and diagnostic control mechanisms ensures close monitoring, which is important in order to discover problems and take corrective actions early (Vanhoucke, 2014). However, the need to flexibly adjust to new findings and requirements makes it essential to have a strong interactive control system in the form of meetings, daily interactions, discussion and transparent communication (Simons, 1995b). Managers must ensure that the mechanisms in place are understood and applied correctly, and that collaboration is lived border crossing. Hence, managers must provide an environment that makes it easy for the employees to make sense out of their business activities in relation to the company's strategy.

In addition to the balance of levers on each level, the balance of levers that link the levels with each other is essential for the project success: the control linkages. Boundary and diagnostic control can be considered to be a framework for this linkage. Strategic plans connect business goals and guide direction, common standards and processes ease the collaboration between different areas and units. Using the same ways to measure and monitor further makes different business parts comparable, and also makes it possible to have a meaningful overview of the businesses. To benefit from the expertise within the whole organisation, integrate systems in large scale and work efficiently, the boundary and diagnostic control systems must be applied interactively, from the corporate to the project level. This means, that the mechanism that support boundary and diagnostic control must be strengthened by active communication, which ensures that the mechanisms fulfil their purpose, but not limit productivity through bureaucracy and long decision processes. Moreover, a strong belief system must be prevalent on all organisational levels that builds a direct link for the projects to the organisational structure, and that fosters collaboration and supports the one-company thinking.

## 6 CONCLUSION

*The final chapter concludes with a recapitulation of the thesis' purpose and sets the findings in the broader context of management control literature. Furthermore, both the theoretical and practical contributions of the thesis are presented, followed by the limitations and suggestions for future research.*

### 6.1 Balancing Control Linkages

P-form organisations that are working on the cutting edge of technology must develop efficient MCSs that are able to support the execution of complex projects, which are characterised by high cost, engineering prowess and the integration of systems and networks. The purpose of the thesis was to deepen the understanding of the control mechanisms that P-form organisations use to deal with this task, taking into consideration the control mechanisms applied on the different organisational levels as well as the control linkages that build a connection among these levels.

To serve this purpose, an empirical case study was conducted at the Swedish aerospace and defence company Saab AB. Based on the literature review in the field of MCSs, the Levers on Levels model was developed, which provided a framework for the analysis of the empirical data and helped to answer the research question “*How do P-form organisations use control linkages to integrate levers of control across the organisational levels?*” It has been shown that even though P-form organisations are particularly suitable for the execution of complex projects (Hobday, 2000b), the organisational structure of large companies and the number of organisational levels partly work against this flexibility. While projects are able to adjust quickly, the MCS of an organisation must ensure to take advantage from this flexibility, and not create inefficiencies through too tight control such as rigid processes and complicated administrative procedures. Therefore, it is important to understand the different roles of organisational levels in P-form organisations, create a balance of control levers on each level, and also balance the control linkages, which are essential for the connection of the levers on levels. Hence, control can be integrated and complex projects executed successfully.

The study has confirmed that companies have the tendency to install boundary and diagnostic control systems in order to optimise their business activities (Räisänen and Linde, 2004; Simons, 1995b).

This counts for the levers on each level, but also for the control linkages, namely, mechanisms such as mandatory processes and strategic planning procedures, which build a strong connection across organisational levels. However, a MCS is not a rigid construct but a flexible system and only the employees bring the system to life (Merchant and Van der Stede, 2012). Especially in industries that deal with a high degree of uncertainty and risk, the balancing interactive control and belief systems are very important for the execution of complex projects. The interactive control system in the form of meetings, discussion and dialogue enables flexibility within the set boundaries, continuous learning and transparency (Simons, 1995b); and the belief systems creates an environment that unifies employees, encourages collaboration across borders and provides the company with a clear strategic direction (Marginson, 2002; Mundy, 2010). This is crucial particularly for P-form organisations in which the sum of temporarily decentralised projects directly impacts the company's performance.

## 6.2 Theoretical Contributions

The findings of the thesis contribute to the broad field of MCSs. With the development of the Levers on Levels model two earlier developed frameworks got combined and were set into the context of the P-form organisation, which enables new insights for both of them. More precisely, we emphasise the need to gain a profound understanding of the level structure of contemporary, complex organisations. Based on that, it is important to understand the control mechanisms in place on each level, and more particular, the control linkages that connect the control levers on the levels. We argue, that only by taking on this holistic view and considering both the levers and the linkages, it is possible to fully understand the operating principles of management control and their impact for the performance of organisations. Thereby, the thesis makes three contributions to literature.

First, we have transferred Simons' LOC framework into the context of P-form organisations. While the original LOC framework does not distinguish between different organisational levels, the Levers on Levels model enables the analysis of control levers per level. In contrast to Simons (1995b) we argue that it is essential to take on a holistic view of management control and consider control levers across the organisational levels. This multi-level perspective has been emphasised also by authors such as Fisher (1995); Sydow et al. (2004); and Jannesson et al. (2016), however, no distinctions have been made between different types of organisations, and the corresponding different views on the different organisational levels.

In the context of P-form organisations, taking on a multi-level perspective means that the classic differentiation between corporate, business and functional level gets extended by a fourth level: the project level. Due to the characteristics of the P-form organisation, it is not possible to specifically allocate this fourth level into the organisational structure. Instead, the project level is a flexible construct that covers projects within functions, within businesses or projects that cross the borders of the organisational structure. Considering the direct responsibility of the project level for the execution of complex projects, it is important to be aware of its significance for the performance of the whole company.

Second, a balance of control levers on each level is the prerequisite for the efficient project execution in P-form organisations. In the same way as Simons (1995b) argues for a balance of the four control levers belief system, boundary system, diagnostic control system and interactive control system from a corporate perspective, it has been found out that this balance is also necessary from a multi-level perspective. However, in line with authors such as Canonico and Söderlund (2010); Hobday and Brady (1998); and Räisänen and Linde (2004) it has been noticed that companies tend to strengthen rather rigid types of control in order to ensure efficiency across all the organisational levels. More specifically, the number of tight control mechanisms increases as more managers are involved into the project execution, which shows that the strength of the balancing interactive control and the belief system are particularly important on the project level. Therefore, our findings support Mundy (2010) who points out that interactive control plays a crucial role in achieving and sustaining a balance between the control levers as it fosters both control and empowerment; and also Marginson (2002) who has found that the belief system becomes much more important in complex environments. Moreover, the belief system is particularly important in P-form organisation to work against the autonomy of the cross-functional and temporary projects, emphasize a one-company thinking and thereby border-crossing collaboration.

Third, the combination of the LOC framework with the tentative model has led to the introduction of the term control linkages as enabler for integrated control. As stated by Nilsson and Rapp (2005) integrated control ensures a steady flow of information within and between control mechanisms, which directly impacts competitive advantage and performance; and Sinha and Ven de Ven (2005) point out the positive effects of interactions and synergies across organisational levels. However, it is not examined how this integration of control can be achieved. We argue, that in addition to the balance of control levers on each level of the organisation, there must be a balance of the control mechanisms that directly connect the levers on the levels: the control linkages.

Thereby, boundary and diagnostic control set the formal frame for the control linkages among the levels, they ensure a shared terminology and enable efficient work procedures. But these systems only reach their full potential if they are applied interactively, and if they are supported by a strong belief system that guides the direction of the company.

As the interactive control and the belief system require management attention, this means for P-form organisations that the middle management plays a crucial role to reach a balance between all the four control levers. This is in line with authors such as Lindkvist (2004) who points out the critical role of managers to ensure efficient management control and avoid the disconnectedness of projects; and Marginson (2002) who emphasises the responsibility of the middle and lower management to translate and implement strategy. Hence, all the four levers of control must be applied to build a strong connection between the control mechanisms in place on the different organisational levels. In that way, the company can benefit from both the efficiency of standardised work procedures and the flexibility of P-form organisations that face the challenge to handle complex projects of versatile nature, risk and uncertainty.

### 6.3 Practical Contributions

Even though the findings have been the result from a single-case study, conclusions can be drawn that are relevant for a number of P-form organisations that are working with complex, high-tech, engineering-intense projects. The study has confirmed that companies have the tendency to aim for an increase in efficiency with the help of an increased number of control mechanisms, and tighter control mechanisms. Companies focus more on boundary and diagnostic control systems, such as standardised planning procedures, defined budgets and strict process maps; than on belief and interactive control systems, such as the communication of shared values, open dialogue and a meeting culture. Awareness of the importance of a balance of control mechanisms on each organisational level, and particular attention to the control linkages can significantly strengthen the MCS of an organisation. Hence, it strengthens the collaboration among business areas, units and projects and at the same time improves efficiency in the project execution. Three specific suggestions are made that aim to improve the balance of control systems in organisations.



To begin with, top management can strengthen interactive control and belief systems by communicating a one-company culture actively, and by settings examples in terms of interaction, openness for discussion and transparency. However, the P-form organisation comes along with partly decentralised projects and thereby limited top-management control. Therefore, middle and lower management play an important role when it comes to the link of the project with the company's vision, mission and values and thus the creation of a one-company culture that is prevalent in the whole organisation. Preparing managers for this task and raising awareness of their role with the help of leadership training can strengthen this connection.

In addition, training in terms of how to work with the boundary and diagnostic control systems in place can make it easier for managers, and everyone who is involved in these processes, to benefit from the flexibility of the systems. Particular when such systems are implemented newly, it is important to raise acceptance and understanding with the help of management attention (interactive control) and by providing employees with profound trainings. It is necessary to make the usage of the new system as easy as possible and encourage the employees to discover the benefits of the systems in the daily work even though it might be time consuming in the beginning. The focus on the successful implementation and the collection of constructive feedback improves the effectiveness of the system in the long run.

Finally, even though P-form organisations deal with a large variety of different projects, repetition occurs in the type of problems and different areas or units face similar challenges. These challenges might be technical by nature, or have a methodical background such as the breakdown of larger into smaller targets and activities. The management of P-form organisations must create the culture and the technical requirements to share knowledge in the form of best practices, merits and pitfalls. By fostering border-crossing communication and emphasising collaboration, the company can benefit from its expertise in large scale, save time in the daily work and enable the continuous improvement of their activities.

#### 6.4 Limitations and Future Research

The thesis has deepened the understanding of MCSs in P-form organisations, considering the control mechanisms and the linkages between them on different organisational levels. Despite both the theoretical and practical contributions, the findings must be handled with caution.

Limitations are given related to the methodology, and related to the applied theoretical concepts. However, these limitations also open the possibility for additional research in order to validate and build upon our findings.

First, our findings are the result of a single-case study in a very specific field of business. By choosing an extreme case from one of the key high-tech industries of the global market, we aimed to identify critical aspects that are also relevant for other industries. It is assumed, that other companies in similar environmental settings deal with similar issues, particular taking into account that topics such as project-work and the need to develop and innovate have become crucial for more and more industries. However, the transferability of the findings cannot be taken for granted. Therefore, future research should investigate the applicability of the Levers on Levels model in a variety of settings and compare the findings with the results presented.

Second, by analysing a P-form organisation we have chosen a case in which the project-level is especially important for the business performance. The level structure of other companies might be significantly different. However, by pointing towards the need to firstly gain an understanding of the level structure of organisations, and then taking on a multi-level perspective that also considers the control linkages among the levels, we have therefore opened a new landscape of research. This is relevant taking into account that contemporary companies are typically characterised by complex organisational structures. Hence, future empirical studies are needed that examine the differences of level structures in organisations, followed by the analyses of the MCS consisting of both levers on levels and control linkages.

Third, the thesis topic has been focused on MCSs, and the control linkages of the levers between different levels. Considering the tentative model from Nilsson and Rapp (2005) it is argued that companies not only need to achieve integrated control but also strategic congruence between the different organisational levels. The relationship of the strategies as well as the connection between the strategies on different levels with the MCS on each level has not been taken into consideration. Therefore, further research could investigate the phenomenon of strategic congruence in P-form organisations by analysing the topic from four different perspectives. Additional questions could arise in regards to the relationship between strategic congruence and control linkages. Such studies could increase the knowledge on the interface between strategy and management control, particular in the context of P-form organisations.

## REFERENCES

- Acha, V., Gann, D.M., and Salter, A.J. (2005). Episodic innovation: R&D strategies for project based environments, *Industry and Innovation*, 12(2): 255-281.
- Andersen, E. S., and Jessen, S. A. (2003). Project maturity in organisations. *International journal of project management*, 21(6), 457-461.
- Anthony, R. N. (1965). *Planning and Control Systems: A Framework for Analysis*. Division of Research, Harvard Business School: Boston.
- Auerbach, C., and Silverstein, L. B. (2003). *Qualitative data: An introduction to coding and analysis*. NYU Press: New York.
- Barnard, C. I. and Andrews, K. R. (1968). *The functions of the executive* (Vol. 11). Harvard University Press: Cambridge.
- Bassey, M. (1999). *Case study research in educational settings*. McGraw-Hill Education. Open University Press: Buckingham.
- Bazeley, P., and Jackson, K. (Eds.). (2013). *Qualitative data analysis with NVivo*. Sage Publications: London.
- Bonner, J. M., Ruekert, R. W., and Walker, O. C. (2002). Upper management control of new product development projects and project performance. *Journal of Product Innovation Management*, 19: 233–245.
- Brady, T., and Davies, A. (2004). Building project capabilities: From exploratory to exploitative learning, *Organization Studies*, 25(9):1601-1621.
- Brinkmann, S. (2014). Interview. In *Encyclopedia of critical psychology* (pp. 1008-1010). Springer: New York.
- Bromwich M, and Bhimani A. (1994). *Management Accounting Pathways to Progress*. CIMA Publishing: London.
- Bryman, A. (2003). *Quantity and quality in social research*. Routledge: New York.
- Bryman, A., and Bell, E. (2015). *Business research methods*. Oxford University Press: USA.
- Canonico, P., and Söderlund, J. (2010). Getting control of multi-project organizations: Combining contingent control mechanisms, *International Journal of Project Management*, 28(8): 796-806.
- Carson, D., Gilmore, A., Perry, C., and Gronhaug, K. (2001). *Qualitative marketing research*. Sage Publications: London.
- Chandler, A. D. (1990). *Strategy and structure: Chapters in the history of the industrial enterprise* (Vol. 120). MIT Press: Cambridge.
- Chandler, A. D., Hikino, T., and Chandler, A. D. (2009). *Scale and scope: The dynamics of industrial capitalism*. Harvard University Press: Cambridge.
- Clark, K. B., and Wheelwright, S. C. (1992). Organizing and leading" heavyweight" development teams. *California management review*, 34(3), 9-28.
- Cooper, R. G. (1990). Stage-gate systems: a new tool for managing new products. *Business horizons*, 33(3), 44-54.

- Cooper, R. G. (2008). Perspective: The Stage-Gate® Idea-to-Launch Process - Update, What's New, and NexGen Systems. *Journal of Product Innovation Management*, Vol. 25, No. 3, pp. 213-232.
- Creswell, J. W. (2007). Philosophical, paradigm, and interpretive frameworks. *Qualitative inquiry and research design. Choosing among five approaches*, 15-33.
- Crowe, S., Cresswell, K., Robertson, A., Huby, G., Avery, A., and Sheikh, A. (2011). The case study approach. *BMC medical research methodology*, 11(1), 100.
- Dahlgren, J., and Söderlund, J. (2010). Modes and mechanisms of control in multi-project organizations: The R&D case, *International Journal of Technology Management*, 50(1):1-22.
- Davies, A., and Brady, T. (2000). Organisational capabilities and learning in complex product systems: towards repeatable solutions. *Research policy*, 29(7-8), 931-953.
- De Haas, M., and Kleingeld, A. (1999). Multilevel design of performance measurement systems: enhancing strategic dialogue throughout the organization. *Management Accounting Research*, 10(3), 233-261.
- Dent, J. F. (1990). Strategy, organization and control: some possibilities for accounting research. *Accounting, organizations and society*, 15(1-2), 3-25.
- Drever, E. (1995). *Using Semi-Structured Interviews in Small-Scale Research*. Scottish Council for Research in Education: Edinburgh.
- Dubé, L., and Paré, G. (2003). Rigor in information systems positivist case research: current practices, trends, and recommendations. *MIS quarterly*, 597-636.
- Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review*, 14(4): 532-550.
- Eisenhardt, K. M., and Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of management journal*, 50(1), 25-32.
- Eslami, M. H., and Lakemond, N. (2013). Knowledge Integration in development of complex systems: What suppliers actually do to integrate knowledge with customers? In *Innovation and Product Development Management Conference (IPDM)*.
- Fisher, J. (1995). Contingency-based research on management control systems: categorization by level of complexity. *Journal of accounting literature*, 14, 24.
- Flyvbjerg, B. (2006). Five misunderstandings about case-study research. *Qualitative inquiry*, 12(2), 219-245.
- Francis, J. J., Johnston, M., Robertson, C., Glidewell, L., Entwistle, V., Eccles, M. P., and Grimshaw, J. M. (2010). What is an adequate sample size? Operationalising data saturation for theory-based interview studies. *Psychology and Health*, 25(10), 1229-1245.
- Gann, D. M., and Salter, A. J. (2000). Innovation in project-based, service-enhanced firms: the construction of complex products and systems. *Research policy*, 29(7), 955-972.
- Gill, P., Stewart, K., Treasure, E., and Chadwick, B. (2008). Methods of data collection in qualitative research: interviews and focus groups. *British dental journal*, 204(6), 291.

- Haustein, E., Luther, R., and Schuster, P. (2014). Management control systems in innovation companies: a literature based framework. *Journal of Management Control*, 24, 343–382.
- Hedlund, G. (1994). A model of knowledge management and the N-form corporation. *Strategic management journal*, 15(S2), 73-90.
- Hennink, M. M. (2013). *Focus group discussions*. Oxford University Press: Oxford.
- Henri, J. F. (2006). Management control systems and strategy: A resource-based perspective. *Accounting, organizations and society*, 31(6), 529-558.
- Hobday, M. (1998). Product complexity, innovation and industrial organisation. *Research Policy Volume 26, Issue 6, February 1998, Pages 689-710*.
- Hobday, M. (2000a). Editorial: Innovation in Complex Products and Systems *Research Policy*, vol. 29, pp. 793-804.
- Hobday, M. (2000b). The project-based organisation: an ideal form for managing complex products and systems? *Research Policy*, vol. 29, pp. 871-893.
- Hobday, M., and Brady, T. (1998). Rational versus soft management in complex software: lessons from flight simulation. *International Journal of Innovation Management*, 2(01), 1-43.
- Hobday, M., and Brady, T. (2000). A fast method for analysing and improving complex software processes. *R&D Management*, 30(1), 1-22.
- Jannesson, E., Nilsson, F., and Rapp, B. (2016). *Strategy, Control and Competitive Advantage*. Springer: Heidelberg.
- Jannesson, E. (2016). 'Driving Strategic Change at Saab AB: The Use of New Control Practices', in *Strategy, Control and Competitive Advantage*. Springer: Heidelberg, pp. 27-57.
- Kahneman, D. (2003). Maps of bounded rationality: Psychology for behavioural economics. *American economic review*, 93(5), 1449-1475.
- Kruis, A. M., Speklé, R. F., and Widener, S. K. (2016). The Levers of Control Framework: An exploratory analysis of balance. *Management Accounting Research*, 32, 27-44.
- Langfield-Smith, K. (1997). Management control systems and strategy: a critical review. *Accounting, organizations and society*, 22(2), 207-232.
- Lincoln, Y. S., and Guba, E. G. (1985). *Naturalistic Inquiry*. Sage Publications: London.
- Lindkvist, L. (2004). Governing project-based firms: Promoting market-like processes within hierarchies. *Journal of Management and Governance*, 8(1): 3-25.
- Luft, J., and Shields, M. D. (2003). Mapping management accounting: graphics and guidelines for theory-consistent empirical research. *Accounting, organizations and society*, 28(2-3), 169-249.
- March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization science*, 2(1), 71-87.
- March, J. G. (1995). The Future, Disposable Organizations and the Rigidities of Imagination. *Organization*, 2(3-4): 427-440.
- Marginson, D. E. (2002). Management control systems and their effects on strategy formation at middle-management levels: evidence from a UK organization. *Strategic management journal*, 23(11), 1019-1031.

- Marshall, M. N. (1996). Sampling for qualitative research. *Family practice*, 13(6), 522-526.
- Martyn, P., Sweeney, B., and Curtis, E. (2016). Strategy and control: 25 years of empirical use of Simons' levers of control framework. *Journal of Accounting & Organizational Change*, 12(3), 281-324.
- Maylor, H., Brady, T., Cooke-Davies, T., and Hodgson, D. (2006). From Projectification to Programmification? *International Journal of Project Management*, 24 (8). pp. 663-674.
- Merchant, K. A., and Van der Stede, W. A. (2012). *Management control systems: performance measurement, evaluation and incentives*. Pearson Education: Harlow, Essex.
- Merriam, S.B. (2009). *Qualitative research*. 1st ed. Jossey-Bass: San Francisco.
- Merriam, S. B., and Tisdell, E. J. (2015). *Qualitative research: A guide to design and implementation*. John Wiley & Sons: San Francisco.
- Meskendahl, S. (2010). The influence of business strategy on project portfolio management and its success – A conceptual framework. *International Journal of Project Management*, 28(8):807-817.
- Miles, R. E., Snow, C. C., Meyer, A. D., and Coleman, H. J. (1978). Organizational strategy, structure, and process. *Academy of management review*, 3(3), 546-562.
- Miles, M. B., Huberman, A. M., and Saldana, J. (2013). *Qualitative data analysis*. Sage Publications: Los Angeles.
- Miller, D. (1996). Configurations revisited, *Strategic Management Journal*, 17 (7), 505–512.
- Mintzberg, H. (1989). *Mintzberg on management: Inside our strange world of organizations*. Simon and Schuster: New York.
- Morgan G. (1986). *Images of Organization*. Sage Publications: London.
- Morris, P.W.G., and Jamieson, A. (2005). Moving from corporate strategy to project strategy. *Project Management Journal*, 36(4): 5-18.
- Mundy, J. (2010). Creating dynamic tensions through a balanced use of management control systems. *Accounting, Organizations and society*, 35(5), 499-523.
- Nilsson, F. (2002). Strategy and management control systems: A study of the design and use of management control systems following takeover. *Accounting & Finance*, 42(1), 41-71.
- Nilsson, F., and Rapp, B. (2005). *Understanding competitive advantage: The importance of strategic congruence and integrated control*. Springer: Berlin.
- Nilsson, E. B. (2010). *Strategi, styrning och konkurrenskraft – En longitudinell studie av Saab AB (Eng: Strategy, control and competitive advantage – A longitudinal study of Saab AB)*. Dissertation No. 1318, Linköping Studies in Science and Technology, Linköping University.
- Otley, D. T., and Berry, A. J. (1994). Case study research in management accounting and control. *Management accounting research*, 5(1), 45-65.
- Porter, M. E. (1979). How competitive forces shape strategy. *Harvard Business Review*, 137-145.
- Porter, M. E. (1991). Towards a dynamic theory of strategy. *Strategic management journal*, 12(S2), 95-117.

- Prencipe, A., and Tell, F. (2001). Inter-project learning: processes and outcomes of knowledge codification in project-based firms. *Research policy*, 30(9), 1373-1394.
- Prencipe, A., Davies, A., and Hobday, M. (Eds.). (2003). *The business of systems integration*. Oxford University Press: Oxford.
- Process Review. (2017). Internal written document. Saab. Linköping.
- Process Training. (2017). Internal written document. Saab. Linköping.
- Rathe, A. W. (1960). Management controls in business. *Management Control Systems*, 28-60.
- Ray, G., Barney, J. B., and Muhanna, W. A. (2004). Capabilities, business processes, and competitive advantage: choosing the dependent variable in empirical tests of the resource-based view. *Strategic management journal*, 25(1), 23-37.
- Ritchie, J., Lewis, J., Nicholls, C. M., and Ormston, R. (Eds.). (2013). *Qualitative research practice: A guide for social science students and researchers*. Sage Publications: London.
- Rom, A., and Rhode, C. (2007). Management accounting and integrated information systems: A literature review. *International Journal of Accounting Information Systems*, 8, 40–68.
- Räisänen, C., and Linde, A. (2004). Technologizing discourse to standardize projects in multi-project organizations: hegemony by consensus? *Organization*, 11(1), 101-121.
- Saab 2017, *Annual Report 2017*, viewed 20 March 2018 <[https://saabgroup.com/globalassets/corporate/investor-relations/reports/2018/20180327-updates/saab\\_ar\\_17\\_eng\\_20180319.pdf](https://saabgroup.com/globalassets/corporate/investor-relations/reports/2018/20180327-updates/saab_ar_17_eng_20180319.pdf)>.
- Saunders, M., Lewis, P., and Thornhill, A. (2016). *Research methods for business students*. Pearson Education Limited: Harlow, Essex.
- Schutt, R. K. (2011). *Investigating the social world: The process and practice of research*. Sage Publications: Los Angeles.
- Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for information*, 22(2), 63-75.
- Siggelkow, N. (2007). Persuasion with case studies. *Academy of Management Journal*, 50(1), 20-24.
- Simons, R. (1990). The role of management control systems in creating competitive advantage: new perspectives. *Accounting, organizations and society*, 15(1-2), 127-143.
- Simons, R. (1994). How new top managers use control systems as levers of strategic renewal. *Strategic management journal*, 15(3), 169-189.
- Simons, R. (1995a). Control in the Age of Empowerment. How can managers promote innovation while avoiding unwelcome surprises? *Harvard Business Review*, 80-88.
- Simons, R. (1995b). *Levers of control. How managers use innovative control systems to drive strategic renewal*. Harvard Business School Press: Boston.
- Sinha, K. K., and Van de Ven, A. H. (2005). Designing work within and between organizations. *Organization Science*, 16(4), 389-408.
- Stake, R. E. (1995). *The art of case study research*. Sage Publications: Los Angeles.
- Storey, J. (1985). The means of management control. *Sociology*, 19(2), 193-211.

- Sydow, J., Lindkvist, L., and DeFillippi, R. (2004). Project-based organizations, embeddedness and repositories of knowledge. *Organization Studies*, 25(9), 1475-1489.
- Söderlund, J. (2008). Competence dynamics and learning processes in project-based firms: Shifting, adapting and leveraging. *International Journal of Innovation Management*, 12(1):41-67.
- Söderlund, J., and Tell, F. (2009). The P-form organization and the dynamics of project competence: Project epochs in Asea/ABB, 1950–2000. *International Journal of Project Management*, 27(2), 101-112.
- Söderlund, J., and Tell, F. (2011). Strategy and capabilities in the P-form corporation: Linking strategic direction with organizational capabilities. In *Project-Based Organizing and Strategic Management* (pp. 235-262). Emerald Group Publishing Limited.
- Söderlund, J., and Tell, F. (2012). *Styrning: med projekt och kunskap i fokus*. Studentlitteratur: Sweden.
- Tatikonda, M. V., and Rosenthal, S. R. (2000). Successful execution of product development projects: Balancing firmness and flexibility in the innovation process. *Journal of Operations Management*, 18(4), 401-425.
- Teddlie, C., and Tashakkori, A. (2003). Major issues and controversies in the use of mixed methods in the social and behavioural sciences. *Handbook of mixed methods in social & behavioural research*, 3-50.
- Teece, D. J. (2000). Strategies for managing knowledge assets: the role of firm structure and industrial context. *Long range planning*, 33(1), 35-54.
- Tellis, W. M. (1997). Application of a case study methodology. *The qualitative report*, 3(3), 1-19.
- Thiry, M., and Deguire, M. (2007). Recent developments in project-based organizations, *International Journal of Project Management*, 25(7):649-658.
- Thompson, J. D. (1967). *Organizations in action: Social science bases of administrative theory*. Transaction Publishers: New York.
- Tuomela, T. S. (2005). The interplay of different levers of control: A case study of introducing a new performance measurement system. *Management Accounting Research*, 16(3), 293-320.
- Van de Ven, A. H. (2007). *Engaged scholarship: A guide for organizational and social research*. Oxford University Press on Demand: Oxford.
- Vanhoucke, M. (2014). *Integrated Project Management and Control*. Springer: Cham.
- Wellard, S., and McKenna, L. (2001). Turning tapes into text: Issues surrounding the transcription of interviews. *Contemporary Nurse*, 11(2-3), 180-186.
- Whitley, R. (2006). Project-based firms: New organizational form or variations on a theme? *Industrial and Corporate Change*, 15(1):77-99.
- Widener, S. K. (2007). An empirical analysis of the levers of control framework. *Accounting, organizations and society*, 32(7-8), 757-788.
- Wolcott, H. F. (1994). *Transforming qualitative data: Description, analysis, and interpretation*. Sage publications: Los Angeles.



- Yin, R. K. (2003). 'Designing case studies', in *Qualitative Research Methods*, pp. 359-386. Sage Publications: Los Angeles.
- Yin, R. K. (2009). How to do better case studies. *The SAGE handbook of applied social research methods*, 2, 254-282. Sage Publications: Los Angeles.
- Yin, R. K. (2011). *Applications of case study research*. Sage Publications: Los Angeles.
- Yin, R. K. (2017). *Case study research and applications: Design and methods*. Sage Publications: Los Angeles.

## Appendix A – Interview Guide

### Introduction and Background

1. Could you briefly describe your background, role and area of responsibility?

### Management Control

2. How do you use control to influence employee behaviour in order for the organisation as a whole to move in the intended direction?
3. Can you describe how management control is executed on the different levels of the organisation?
4. How do you follow up on management control? Are there any specific measurements, such as financial key ratios or non-financial?
5. What are the goals of your department and business area? How are the goals followed-up and measured?
6. What modes of control do you think are the most important ones for your department?

### Levers of Control

7. What does “One Saab” mean to you?
8. What tools does the company use to support the idea of “One Saab”? How does this affect project execution and performance?
9. What role do the company’s mission and the values play when it comes to project execution? How are they communicated down to the functional levels?
10. How does upper-level management exercise influence over the business areas?
11. How much are you involved in the activities of your subordinates (decision making, planning, project execution)?

### Problems and Solutions

12. What weaknesses can you see in the management control systems?
13. How can these weaknesses be addressed?

### Historical View

14. How has the modes of control developed over time? What changes can you see, and what does that mean for you?

## Appendix B – Workshop Guide

### **Execute Business Process**

1. What are the main challenges for big vs. small business in the handover to execute business process?
2. What are the main challenges for big vs. small business in the execute business process?
3. How flexible is the execute business process?
4. What are the roles and responsibilities in the execute business process?
5. What is the importance of the process documentations?
6. How does the decision making look like in the EB process and how can it be optimized?

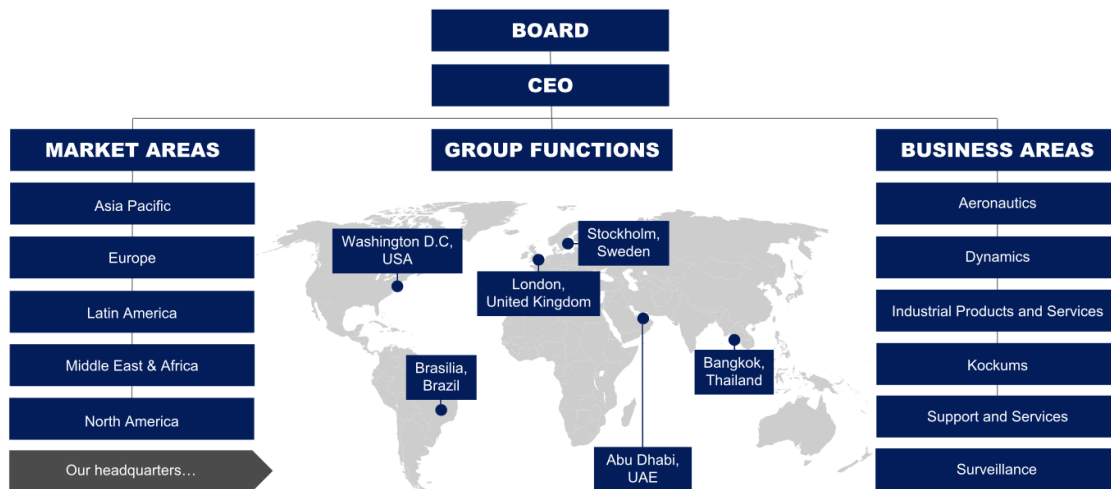
### **Measurements and Monitoring**

7. What are the main project monitoring tools used today and how can it be optimal?
8. What are the main challenges for big vs. small business when measuring and monitor *project progress*?
9. What are the main challenges for big vs. small business when measuring and monitor *performance*?
10. How does the steering group work today and how can it be optimal?
11. How transparent is the measurement and monitoring today?
12. How is the project reporting followed-up?
13. What KPIs are used today in project monitoring and how can it be optimal?
14. How can gross margin deteriorations be decreased?
15. How can we share best practice on follow-up methods/tools between the BUs?
16. Are the tools in place sufficient, or does Saab need other tools to ensure close project monitoring?

## Appendix C – CAQDAS NVivo Nodes

Node (Code)	Number of Sources	Number of References
Budget	3	4
Business Plan	9	20
CSR	7	12
Culture	3	5
Delegation of Authority	3	4
Difficulties	12	40
Directives and Plans	6	10
GMS Processes	13	41
Goals and Targets	10	27
KPIs	7	9
Management Meeting	6	7
Measurement and Follow-up	13	28
Milestones	7	16
Minimum Level of Compliance	3	3
Mission, Vision and Values	8	13
One Saab	9	14
Other Systems (such as Finance and IT)	7	16
Profit and Loss Responsibility	5	7
Pulse or Project Meetings	3	3
Regulations	4	4
Roles and Responsibilities	6	10
Steering Meetings	11	23
Suggestions	8	21
Trainings	3	3

## Appendix D – Saab's Organisational Structure



## Appendix E – Comparison Contract Owner and Project Owner

	<b>Contract Owner</b>	<b>Project Owner</b>
Responsibility	<ul style="list-style-type: none"> <li>• Responsible for executing business within the business area.</li> <li>• Responsible for delivery of the business areas economical targets due to all ongoing contracts.</li> </ul>	<ul style="list-style-type: none"> <li>• To initiate and secure a project that corresponds to the stakeholder's expectations</li> <li>• To evaluate the profitability and benefit in the organisation</li> <li>• To write the Project Directive</li> <li>• To take care of consequences within the organisation</li> <li>• To evaluate experiences from the project</li> <li>• To define and take responsibility for the expected benefits</li> <li>• To decide on the profitability and finance of the project including activating funding from the project risk fund</li> <li>• To manage any financial consequences for the Project Owner's organisation</li> </ul>
Authority	<ul style="list-style-type: none"> <li>• Appoint Contract Responsible.</li> </ul> <p>The management representative also has the authority to request:</p> <ul style="list-style-type: none"> <li>• Resources needed for the execution.</li> </ul>	<ul style="list-style-type: none"> <li>• To approve the Project Directive</li> <li>• To select steering group members</li> <li>• To start the project</li> <li>• To manage possible business relationships</li> <li>• To own, administer, maintain and further develop the project's result</li> <li>• The Project Owner's authorities should be defined when appointed</li> <li>• For decisions outside the project's framework, the Project Owner should present the case to appropriate board depending on the character of the case</li> </ul>