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High Performance Teams- the characteristics and practices of highly efficient teams within organizations

A case study at Saab Airborne regarding how to improve the performance of their system teams

Master of science thesis in the Quality and Operations Management Programme

THILDA MATTISSON

JULIA LOHM WENNERBÄCK

Master thesis E2018:009

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THILDA MATTISSON

JULIA LOHM WENNERBÄCK

Supervisor Chalmers University of Technology: Ludvig Lindlöf

Supervisor company: Per Stollenwerk

Department of Technology Management and Economics

Division of Innovation and R&D Management

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THILDA MATTISSON
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Department of Technology Management and Economics
Division of Innovation and R&D Management
Chalmers University of Technology
SE-412 96 Gothenburg, Sweden
Telephone: +46 (0)31-772 1000

Abstract

Products, processes and services are increasingly becoming more complex, urging organizations to enhance their operations in order to remain competitive in their markets. In several organizations, the usage of teams is considered one way of strengthening the operations. As teams and teamwork hence is becoming more commonly used, it is of great importance to understand how to increase the efficiency and performance of these teams.

The purpose of this master thesis is to investigate which characteristics and practices are describing high performance teams. Furthermore, the authors will provide Saab Airborne with a recommendation for what to focus on in order for their system teams to become high performing.

The research was conducted by the use of a qualitative method. In order to find what characteristics and practices are common in high performance teams, a literature review was performed, investigating theory by different authors. In addition, interviews were conducted with well-functioning, efficient teams. The literature review and interviews resulted in a framework. Moreover, interviews were held with team members at system teams at Saab Airborne. These interviews were compared to the created framework in order to find recommendations for how to increase the efficiency in the teams.

The framework created consists of 9 categories; Goals, Member Contribution, Mutual Support & Collaboration, Self-organization, Communication, Planning & Coordination, Sense of Belonging, Evaluation & Feedback and Motivation. All are considered important in order to become or remain a high performance team, but to improve some of the categories are preferred above improving none. Regarding the recommendations for Saab Airborne, the teams are considered to be very good at their tasks, but the teamwork could be improved. Saab Airborne should focus on improving leadership, communication and collaboration. By starting with focusing on these, several categories in the framework will be improved, and the teams could have the possibility of increasing their efficiency and performance.

Keywords: High performance teams, Teamwork, Communication, Motivation, Self-organization

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Secondly, we would like to thank the companies and individuals outside Saab; Combitech and Volvo Cars, that put time and effort in helping us during our research for us to gain a deeper understanding of the way they operate their teams, which has been of great value for the results of this research.

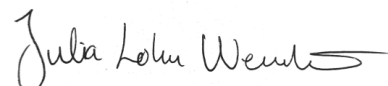
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Thilda Mattisson



Julia Lohm Wennerbäck

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Vocabulary

Base program	-	The base program at Saab Surveillance is the program in which all the system teams that has been studied are a part of. This program is newly started and the aim is for it to lay a foundation on how to handle all future projects within this division
Inkrement	-	Inkments are what the use at Saab to divide the projects to divide the project into time periods. One inkrement is a 3 month period in which all system teams have divided their projects. All teams make an inkrement plan on what they are to perform during that time.
Jira	-	Jira is a platform in which Saab uses to create their sprints in which they use if they use the tool Scrum. Jira is also the platform in which all error-reports from I&V are gathered so that all can take part of them.
Confluence	-	Confluence is an internal platform for the employees at Saab. They can use it to communicate, store reports etc.
Drops	-	The drops are all the codes and functions that C2 has been produced that they deliver for testing at I&V a few times every inkrement.
Error-documents	-	The error-documents are the documents with the detected errors that are created when I&V have done their integration of the new functions.
Subsystem	-	The subsystems are part of the base program at Saab Airborne. Each subsystem is responsible for different parts of the product, such as hardware, software or requirements from customers and product management. The employees in the case study belongs to one subsystem, but could be part of many system teams.
System team	-	The teams investigated in the case study. The system teams are part of the base program, and consist of members from different subsystems.

Abbreviations

HPT	-	High performance team
MS	-	Mission System
I&V	-	Integration and Verification
PDS	-	Planning and Debriefing System
R&R	-	Record and Replay

1. Introduction

This first chapter will begin with background information about the subject and about Saab Airborne, followed by the purpose of the thesis. The next section of the chapter will describe the research questions formulated, on which the thesis was based. Furthermore, the delimitations and restrictions of the project will be mentioned.

1.1 Background

Humans have used groups to perform tasks throughout history. Using a group to create mutual benefits is the oldest form of social organization, and has been used to generate new ideas and completing tasks in different situations (Wheelan, 2013). Today, working in groups is commonly used in many organizations and businesses. Given the complexity in many of the products of our time, these often require people to work in groups (Wheelan, 2013). Hence, organizations more commonly use teams and have a team-based philosophy in the fast-changing environment where companies work today (Sheard and Kakabadse, 2002). Robots are increasingly conducting the more repetitive tasks, while the remaining tasks are in need of collaboration between people. Having groups and teams is required in order to create success for companies, since it gives the benefit of a collected source of knowledge and skills useful to complete complex tasks (Wheelan, 2013).

There is a lot of theory regarding how to efficiently work in teams, and one of the expressions often mentioned when discussing this topic is high performance teams. There has been a lot of research regarding high performance teams and thereby a lot of data is available, but there is no general definition of what characteristics a high performance team. When investigating teams, teamwork can somewhat be described by the golden circle (Sinek 1, 2009), which focuses on the difference between why you do something, how you do it and what you are doing. The function of the team is why you are doing something, hence describing the purpose of doing it and not how or what you are doing. By understanding the “why” in the golden circle, it is easier to focus on what is actually valuable and how to enhance it. This is important to understand when an organization invests in teams, since it is probable that when having the knowledge of why some practices within teamwork are important, the willingness to put effort and resources on the team will increase.

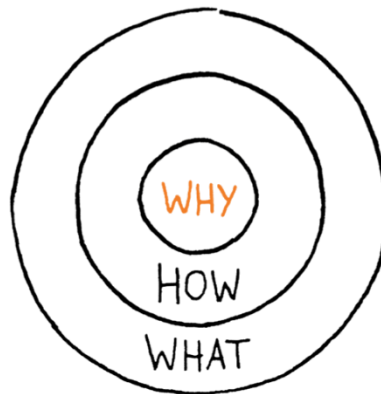


Figure 1 The Golden Circle (Sinek 2, 2009)

One organization currently working with teams and who is interested in improving them to become more efficient is Saab. Saab is a Swedish company with more than 16 000 employees, serving the global market with products and services regarding military defense as well as civil security (SaabGroup 1, n.d.). Saab consists of several business areas, where Surveillance is one of them. Surveillance has approximately 4 000 employees, and consists of several subareas, where this thesis has been focusing on the area called Airborne. Saab Airborne has products such as surveillance planes with radars, which has been the product in focus for the teams that has been investigated in this project (SaadGroup 2, n.d.). At Saab Airborne the division System Design Mission System has been the research object for this thesis. This division is part of the so called base program at Saab Surveillance. The task of the base program is, briefly explained, to deliver several parts of the final product, such as radar, software, hardware, computers etc., and to assure these different parts operate as planned when used together. There are system teams consisting of employees from different subsystems within the base program. Each team is responsible for different tasks and functions of the final product. Today, there is no predefined, structured coordination plan for teams covering the entire organization at Saab Airborne and thereby not at the division System Design Mission System either, and the efficiency varies between different teams in the organization. However, the company understands the lack of efficiency in some teams, and are interested in finding potential improvement areas to invest resources in.

1.2 Purpose

The purpose of this report is to investigate what makes teams within organizations high performing. Furthermore, the aim is to provide Saab Airborne with a recommendation regarding how to operate their system teams within the division System Design Mission Systems, and what to focus on, in order for the teams to become high performing.

1.3 Research questions

To obtain focus in the project, it is important to create research questions. The questions are a way to consider more in detail what is actually in need of answering, rather than just searching for general facts regarding the topic. Research questions are a guide throughout the process when taking decisions of different forms, and assure that the project remain focused (Bryman & Bell, 2015). Below there are two research questions presented, which were the guide for this project. In order to create an insight in the theory of efficient teams and how teams in practice operate and what makes them efficient, the first research question was:

RQ1. What practices and characteristics should an organizational team have in order to become/remain high performing?

This research question contains the gathering of information about high performance teams to create a understanding of what distinguish and characterize them. To answer this question both theory and data collected from interviews with teams that are known to be more well-functioning and efficient were reviewed. The aim with this research question was to formulate a framework describing a high performance team.

RQ2. Based on the results in the previous research question, what is the gap between the practices and characteristics of a high performing team in general, and system level R&D teams in a complex high-technology context in particular?

In order to study the gap hindering system teams to become high performing, four system teams at Saab Airborne have been the research objects in the performed case study, and they represent the system level R&D teams in a high-technology context. The current situation regarding teamwork was mapped and afterwards compared and analyzed with regards to the framework that had been formulated in research question one. The investigation was mainly focused on the division System Design Mission Systems at Saab Airborne since they currently do not have a clear approach for how to work within teams and therefore there is an opportunity to improve how they operate their teams, and thereby their efficiency. From the answer to this question, recommendations are provided for how Saab Airborne could decrease this gap.

1.4 Delimitations

The scope of the project has mainly focused on teams working within system development and software engineering, and especially four teams at the division System Design Mission System at Saab Airborne. Further, the authors have scoped the research into not all members of the four teams that the research has been focusing on, since the scope would be too large if all members would be part of the study. Moreover, teams in some other areas were investigated in order to create a broader understanding of the research topic, and these were presumed to represent well-functioning teams in general. Furthermore, there have not been any quantitative measurements of the teams' performances, since there was no efficient approach to quantifying the performance, and there was not enough time to develop a method to calculate it at the company. Therefore, the way of evaluating the performance in this thesis depended upon theory and case studies.

1.5 Restrictions

The available theory regarding teams is generally written which makes it hard to know if it will be efficient in all types of organizations and departments. Therefore, a difficulty in this research was to find theory regarding efficient teams that is highly related to the type of teams that the study focuses on, namely within system development and software engineering. The general theory along with data collected by conducting interviews guided the authors through the restriction. Another restriction occurred during interviews; there is a risk that the interviewees hesitated to describe the situation as they actually experience it and refrained from sharing all information. This could have occurred for example if the interviewee was dissatisfied with something but was anxious about describing their feelings and did not want to talk about it with the interviewers. Furthermore, the authors of this thesis have not been interviewing all members of each system team, and therefore all members have not been able to express their views of their teamwork, which is a restriction. The framework has been elaborated from discussions and reflections by the authors of this thesis, and it can be viewed as a restriction that only two people elaborated the framework and that the results probably would not have been the same if someone else did the same investigation.

2. Methodology

This chapter describes how the research in this thesis have been conducted; the methods that have been used in the process of answering the research questions. The research strategy, research methodology, research process and research quality are presented below.

2.1 Research strategy

According to Bryman and Bell (2015) there are two approaches in conducting a research strategy; qualitative and quantitative. The qualitative research strategy emphasizes words while collecting and analyzing data, in contrast to quantitative in which the emphasis lies in the amount of data (Bryman & Bell, 2015). This report has been performed using a qualitative approach since the focus has been on collecting detailed data regarding a narrowed topic instead of collecting a larger amount of scarce data. The research has been performed by using an deductive approach. Bryman and Bell (2015) describe an inductive approach of a study as theory being the outcome of research, whereas in a deductive study the approach is the contrary. In a deductive research, theory is available and a hypothesis is conducted, data is collected on which the hypothesis is tried upon which can lead to a revision of the theory (Bryman & Bell, 2015). The reason of which this study has been performed as a deductive research is since available theory regarding the subject has been studied and by performing interviews with well-functioning teams based on this theory, the theory regarding high performance teams has been revised from how high performance teams operate in practice.

2.2 Research methodology

To answer the formulated research questions three methodological approaches have been conducted. These three are; a literature review, interviews with employees working at Saab Airborne and a cross-case analysis regarding companies that are known for successfully working within well-functioning and efficient teams.

2.2.1 Literature review

The process of writing this thesis started with an extensive literature review where theory regarding the subject was studied. Literature and articles regarding how to efficiently work in teams, the reasons for why a company should work in teams and how to become a high performance team was reviewed, to create an insight in the topic. In some divisions at Saab today, they work according to Agile methods, which includes a great deal of teamwork and tools. To determine whether this approach could be a good fit for system teams at the department of interest at Saab Airborne, as well as understanding how this make the teams more high performing, theory concerning Agile methods was studied. This also included theory regarding the tool Scrum and theory about self-organizing teams. At the beginning of the project, the literature was used to provide a foundation for the authors to collect information and create some insight regarding the research topic. Later in the process the theory was also used to perform a comparison with the empirical data as well as to be a part of the creation of the framework regarding high performance teams, used in the final recommendation for Saab Airborne. To reach this, the literature has been analyzed together with the collected data from the interviews with both well-functioning and efficient teams and the system teams at

Saab. The literature review has been an iterative process that has been conducted throughout the entire project.

2.2.2 Interviews

As previously mentioned, 21 interviews have been conducted in addition to collecting data by studying literature. These interviews were performed in a semi-structured manner. Bryman and Bell (2015) defines a semi-structured interview as the interviewer following an interview guide with prepared questions, but regarding to the interviewee's answers some additional questions could be added along the way. In the case of this project, the purposes of conducting semi-structured interviews were that it was of importance to be prepared and well-informed before the interview and therefore having prepared questions, at the same time as noticing that the interviewee could come with interesting insights during the interview, that would be poor to miss and not follow up.

The purpose of interviewing people working in the four system teams within System Design Mission System at Saab Airborne was to create a deeper understanding of how they work at their department today but also to interpret how these people would like to work and what motivates them. In excess of interviews with the employees at Saab, companies/teams that are known for having well-functioning and efficient teams were interviewed. The reasons for these interviews were to receive a wider scope of information and understand more about how efficient teamwork is performed in external organizations, outside of theory. Per Stollenwerk, sub-project leader at Saab Airborne, provided help to find suitable personnel to interview at Saab. The external companies to interview regarding the cross-case analysis were found and contacted with help from the supervisor at Saab Per Stollenwerk, division manager at Saab Thomas Ridderstråle and Johannes Berglind Söderqvist, PhD within Innovation and R&D management at Chalmers. Two interview templates were conducted, one for the system teams and one for the well-functioning and efficient teams (see Appendix II). Before performing the interviews, the templates were discussed and rewritten with the supervisor at Saab Airborne to make sure that all topics of interest were covered. The dependability of the research is seen as strengthened by Bryman and Bell (2015) if templates are used. Furthermore, six additional interviews were conducted with employees at Saab in order to increase the knowledge of the authors regarding different aspects important for the thesis. These interviews were conducted through discussions rather than with a predefined template.

Each interviewee also answered a survey regarding their perception of the teamwork. This was based on a survey by Wheelan (2013), who has created her survey in order to investigate at what stage in the group development process a team is situated, but the survey was adjusted to suit the aim of this thesis, by removing some questions and adjust the scores. The survey is presented in Appendix I.

2.2.3 Case Studies and Cross-case analysis

To get a deeper insight in the way people work within teams today, a cross-case analysis was performed. Khan & VanWynsberghe (2008) defines a cross-case analysis as a research method that mobilizes the knowledge from case studies by accumulating the knowledge and comparing the cases, which will lead to production of new knowledge. This analysis included a comparison between the case studies of the system teams from System Design Mission System at Saab Airborne, teams at other divisions at Saab Surveillance and teams within companies known to be well-functioning and efficient within teamwork. The data and

knowledge needed to perform an analysis was assembled by conducting interviews, which followed the procedure described in the paragraph above. The purpose of the cross-case analysis was to gather information regarding successful teams from both available theory from literature and thereafter compare and analyze these approaches with real cases, which in this case were existing teams. By merging the theory and case studies, a new framework regarding high performance teams could be conducted by the authors.

2.3 Research Process

In the process of conducting the master thesis, a backlog has been used to some extent. This means that the process in some aspects have been similar to working with the Scrum tool, in order for the authors to create a deeper understanding of the tool. Tasks which needed to be performed in order to answer the research questions was registered into a software program, where the task could then be moved depending on if the status of the task was under process or finished. Moreover, sprints were created considering what tasks were to be performed within a predefined time period. As Sutherland and Schwaber (2013) describes, the prioritization of the tasks was changed during the working process depending on which was regarded most important at the moment. Hence, a detailed plan of when to perform what task was not defined at the beginning of the process, but instead the plan was rearranged when time passed according to the information gathered.

The process of conducting this thesis has been divided into two parts, part A and part B. Part A covers the answer of the first research question while part B consists of the case study at Saab Airborne, answering the second research question. The reason to why the thesis has been divided is since the result of part A was used when performing part B. Therefore, the framework that was conducted in part A was used when analyzing the data collected in part B. Below the research process is presented in figure 2.

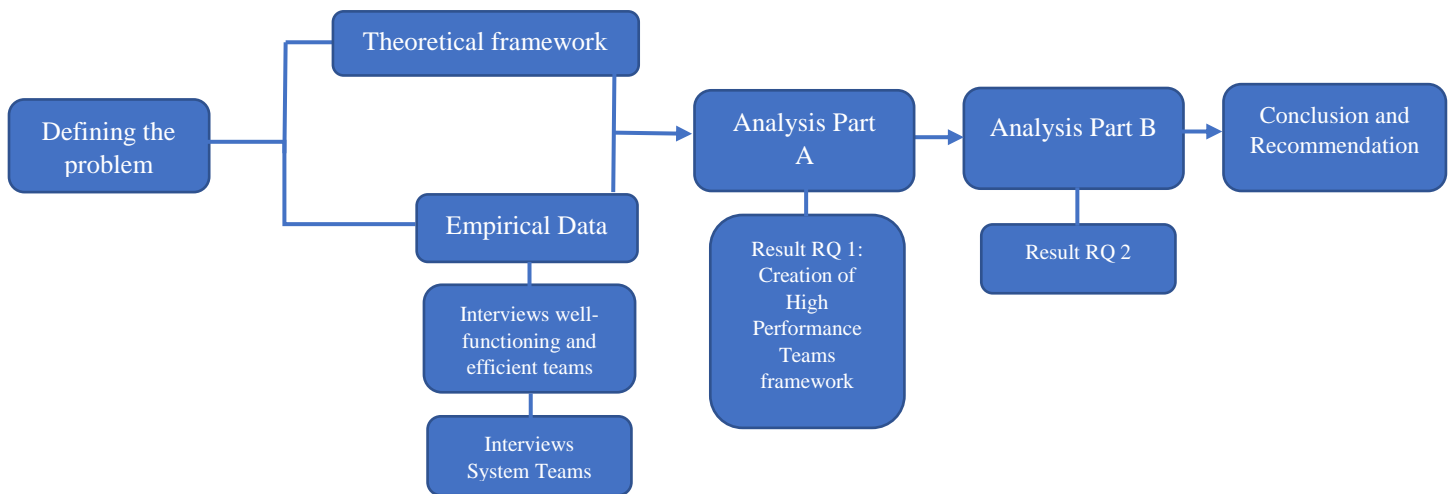


Figure 2 The research process for this master thesis

The literature review has been of great importance in part A of the research process to answer the first research question, and regarding what practices and characteristics a team should have in order to become/remain high performing. Information about the topic was studied, and eventually three main authors or pair of authors became the focus. These three definitions were chosen since they have been composed by

studying a large amount of teams in real life and based their theory on their practices. Thereafter, by comparing their definitions with each other as well as with theory regarding Agile, Scrum, self-organizing teams and obstacles in becoming high performing, the most frequently used terms were collected and compiled in a theory-table. To extend the knowledge gathered from this, interviews were held regarding the research question with members of well-functioning and efficient teams and people with great insight into the topic. These people came from other departments at Saab Surveillance and from Volvo Cars and Combitech, and they were chosen since they are, according to the supervisors of the thesis, successfully using teams in a way that increases efficiency. As well, the teams scored high in the survey, which indicated that they are more developed as teams. The interviewees are presented in table 1.

Table 1 Interviewees from well-functioning and efficient teams

Interviewee	Company	Position
Åse Björnstad	Saab	Scrum master
Sofia Jacobsson	Saab	Scrum master
Jens Augustson	Combitech	Manager
Rafika Mutia	Combitech	Tribe leader
Ola Tangvald	Combitech	Scrum master
Adam Olsson Mårell	Volvo Cars	Scrum master

The answers from these interviews were analyzed and compared with the theory-table, to provide a final framework with which the information from the system teams could be compared. This was the framework of what characterize a high performance team. In figure 3 below the process of conducting the framework is presented.

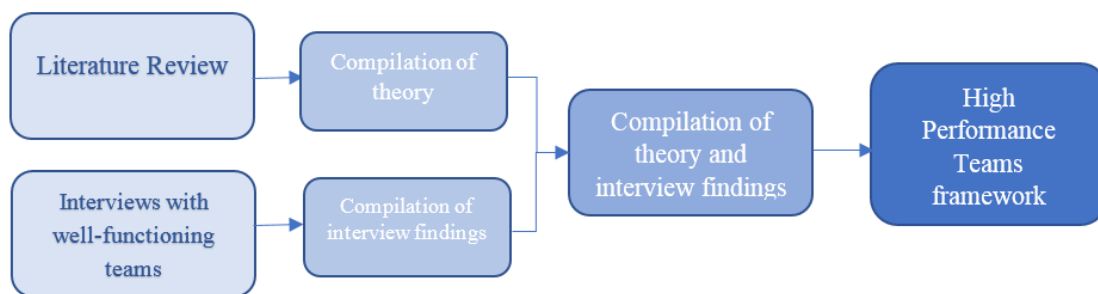


Figure 3 Visualization of the process of conducting the framework

Furthermore, part B of the research process considered the second research question, regarding the gap between a high performance team and how a system team in a complex high-technology company currently works within teams, was answered by creating an overview of the current situation at the system teams at Saab Airborne as a research object. The overview was partly created through the interviews with suitable people from Saab Airborne, primarily team members from the system teams, to understand what knowledge regarding teamwork the teams possessed and what aspects they found important. The reason why these

teams were chosen was partly since the supervisor for the thesis at Saab is the sub-project leader for these teams. The supervisor was part of creating the thesis and found these teams interesting for the research as well as being suitable since he already held much information about them that he could provide to the authors, which was helpful at the start of the project. Furthermore, the system teams had members that were part of different subsystems at Saab Airborne (apart from one of the team which did not include all subsystems), making them interesting to compare. Moreover, the teams were suitable since collection of information could be made from several members, who had different tasks in the team. However, not all members from the teams were interviewed. The aim was to interview one member from each subsystem in each team, to have balanced and equal distributed information, to thereby enable a fairer comparison. Some employees are part of several teams, but in these cases, they have been asked to answer the questions with regards to only the team the interview is concerning. The interviewed system team members are presented in table 2 below.

Table 2 The four system teams and the subsystems each member represents in the team

Link E	PDS	MTS	R&R
Mission system	Mission system	Mission system	Mission system
I&V	I&V	I&V	I&V
C2	C2	C2	C2
-	Platform	Platform	Platform

Furthermore, information was collected about how the departments at Saab are organized and how they work with teams regarding projects today by interviewing other employees at Saab. These interviewees are presented in table 3.

Table 3 Interviewees with different positions at Saab

Interviewee	Position
Per Stollenwerk	Subproject leader at System Design AEW&C
Thomas Ridderstråle	Division manager at AEW
Stefan Karnevi	Division manager at System Design AEW&C
Helena Bengtsson	Department manager at Baseline Program Management
Marielle Lennartsson	HSI expert at System Design AEW&C
Tomas Bergling	Division manager at System Design Sensor

In the current situation there was no clear approach on how the teams operated and interviews with different team members were therefore performed to gain an insight in this aspect. To answer the research question, the data gathered from the interviews were analyzed together with the scores from the survey. The analysis of the system teams was performed by comparing the teams' practices and characteristics with the compiled framework from research question one. Within each category of the framework the teams were rated by the

authors of this thesis, to reach a broader understanding of the gap. From this analysis, the gap was found and considered when creating a final recommendation to Saab Airborne regarding their teams.

2.4 Research Quality

Reliability and validity are often discussed when talking about qualitative and quantitative research. However, according to Bryman and Bell (2015) there is a recognition that these are not desirable when discussing qualitative research. Instead, there are other criteria possible to use, which are more aimed at qualitative research. Bryman and Bell (2015) present two other criteria, provided by the authors Lincoln and Guba, for assessing a qualitative study: Trustworthiness and Authenticity. These have been considered by the authors throughout this thesis.

2.4.1 Trustworthiness

Trustworthiness is divided into credibility, transferability, dependability and confirmability. These sub criteria are presented below.

Credibility

Credibility considers that there might be several correct aspects of the researched social reality. In order to make the aspect chosen and described in the research accepted by others it is important that the aspect seems credible. By focusing on the credibility, the researcher will to a higher extent follow good practice as well as assuring that the understanding of the social context is the same as the real one. The last part is made by having the studied people confirming the findings, to ensure its correspondence to reality. This technique is called respondent validation (Bryman & Bell, 2015). In order to fulfill this criterion in the thesis, there has been discussions with the mentor at Saab, Per Stollenwerk, to ensure that the perception of the organization and its teams have been correct, as well as asking clarifying questions in the interviews when needed. Also, drafts of the report has been sent to Stollenwerk on several occasions during the research.

Transferability

Transferability is about the external validity. In many cases of qualitative research, the studied area is quite small or specific. A possible problem originating from this is the one of using the results in other contexts or at other times. In order to make the outcome transferable, it is important that the researcher uses a so-called thick description. This implies having a detailed description of the culture in which the study has been performed. Having this simplifies the decision of future use of the results, by better understanding the transferability of the outcome (Bryman & Bell, 2015). Since this thesis has been affected to a great extent by the culture and environment the employees are working in, descriptions of the organization and its structure is provided.

Dependability

One way of fulfilling the third sub criteria of trustworthiness, which is dependability, in the research is to keep records of all steps and phases conducted in the process, such as problem formulation, decisions regarding who to interview and decisions regarding data analysis. From this, other people with insight in the topic can act as auditors, throughout the process or at the end, to assure the procedures have been

followed and to what extent the conclusions drawn from theory are justified. However, this approach is rather seldom used. This might be due to the extensive work included in auditing a qualitative research (Bryman & Bell, 2015). Many of the mentioned steps have been preserved during the process, but there has not been any specific auditing of these steps. However, there has been discussions of the steps with the supervisors at both Saab and Chalmers University of Technology during the process.

Confirmability

The final part is confirmability. This is important due to the fact that when performing a qualitative business research, it is impossible to remain completely objective. However, the researcher should have been acting in good faith and it should be clear that he or she has not let their personal values and beliefs affect the performance of the research or the results in an extensive way. Neither should the use of theory be directed in such a way that it is obviously aimed to reach a specific outcome (Bryman & Bell, 2015). This criterion has been considered throughout the process. The communication with the supervisors has also contributed to following this criterion since they have assured the thesis is as objective as possible.

2.4.2 Authenticity

The other criterion for assessing a qualitative research is, as mentioned, authenticity. This criterion is regarding the political aspect of the research, and consists of five sub criteria. These are; fairness, ontological authenticity, educative authenticity, catalytic authenticity and tactical authenticity (Bryman & Bell, 2015).

Fairness regards the aspect of representing the different people in the social context, to consider their different viewpoints. For example, if interviews are only held with managers, the outcome of the research will not provide the thoughts of other stakeholders such as customers, other employees or suppliers, which hence will not give a fair reflection of reality (Bryman & Bell, 2015). In this thesis, interviews have been held with members of different teams with different tasks, as well as with managers on different levels of the organization, in order to fulfill this criterion. Ontological authenticity regards if members of the social setting could be provided with a better understanding of their social surroundings due to the research (Bryman & Bell, 2015). By providing a comparison and overview of the teams and their thoughts, this criterion is met to some extent. The third sub criteria, educative authenticity, considers the research as a support to members of the social setting to increase their appreciation of other people's perspectives (Bryman & Bell, 2015). This is partly met through the analysis of different interviewees answers. The catalytic authenticity covers if the research has created an incentive for the members to be part of changing their situation (Bryman & Bell, 2015). However, this criterion is difficult to fulfill during the time of the thesis, since it could be a possibility after the recommendation is provided. The final sub criterion, tactical authenticity, regards if the research has provided the members with strengths to take the critical steps to engage in action regarding their situation (Bryman & Bell, 2015). This sub criterion has also been difficult to meet during the time for the project, since it is more believable that this could occur once the employees receives the recommendations.

3. Theoretical framework

This chapter contains the theoretical framework of this thesis. There are several reasons for why a theoretical framework has been of importance for this thesis. Firstly, the research of other authors has been used in order to answer the research question of what is required by a team to become high performing. The previous definitions of this type of team has been used together with the empirical data collected for this thesis in order to answer the question. Regarding the data collection, the second reason for this theory chapter is that theory has been used as a base for what empirical data to search for. This indicates that the interview questions have been based upon theory in order to find out how the current situation at Saab Airborne corresponds to theory, as well as to assure the collecting of relevant data for further comparison and development of a framework. Hence, the theory has also been used to compare the empirical data with definitions from previous authors.

One of the terms frequently used in this report is “team”. The theoretical framework will hence begin with an explanation about what differs a team from a work group. Following this, a chapter regarding Research and Development teams is provided, to create a further understanding of the case study performed in this thesis, where the studied teams in many aspects regards research and development.

The next section of the theoretical framework describes how to create a high performance team, based on three different previous researches. Moreover, the following section describes Agile, Scrum and self-organized teams, since these terms are often mentioned when describing high performance teams, and since it has been discussed and sometimes used in the case study. The definitions will then be compared to create an overview and understanding of what has been found to be the most important aspects to create a high performance team. The chapter of the theoretical framework will end with a section regarding possible obstacles towards becoming a high performance team.

3.1 What defines a team

In organizations, it is important to separate the meaning of work groups and teams. When the focus is on creating common goals as well as an organizational structure which is efficient and works well, the subject is work groups. If the goals have been established and the team members know how to reach these goals in an efficient way, the definition is instead a team. A team then has the possibility to develop into a highly productive team (Wheelan, 2013). Similar to this is the definition given by Levi and Slem (1994), saying that a work group is a group of people who are working together in order to complete a task. Levi and Slem (1994) further states that a work group have a common goal and a leader to coordinate them, but no synergy effect is seen from working together. The performance of a work group is hence a function of the effort of each individual, and also evaluated through evaluations considering each individual performance. Levi and Slem (1994) compares this in their article to a definition of teams given by Katzenbach and Smith, saying that *“a team is a small number of people with complementary skills who are committed to a common purpose, set of performance goals, and approach for which they hold themselves mutually accountable”*. Hence, the characteristics of a team is this increased integration together with the mutual dependence within the team.

Another characterization of a team is that decisions are being made somewhat together, in order to create a feeling of shared responsibility within the team. The decision making can be of varying types, where the leader can play a larger or smaller part. There is not one specific approach which have proven to be the most efficient, instead the approach in making decisions should consider characteristics of both the team and the problem (Levi & Slem, 1994).

3.2 Research and development teams

In this study the research object is a company that primarily works with research and development (R&D), and therefore it is of interest to investigate theory regarding research and development teams and whether they have different requisites than other teams and whether it is of importance to keep some aspects in mind while analyzing this type of teams.

In many aspects, R&D teams are different than other teams, and therefore operate in a different way (Levi & Slem, 1994). Often, the members of a R&D team are technical professionals with specialized knowledge. Also, when developing new products, the tasks performed are also new and hence it is a non-routine work. Having traditional management for a non-routine task is not the most efficient according to Levi and Slem (1994), since traditional management styles tend to focus on having control and maintaining regularity in processes. However, the characteristics of a R&D task often benefit from teamwork. Many times, the task is complicated and in need of different knowledge to be solved (Levi & Slem, 1994). Since R&D is about developing new products, processes and services, employees working with R&D often need to be “professional creatives”, where innovation and creativity is considered important (Zhu & Chen, 2016). Moreover, organizations are often willing to provide people working in R&D with the resources they require as well as training to maintain their skills and benefits for their work. This is because these people are highly valued and the company wish to retain them within the company. Having this support from the organization is important in order to create better teams (Levi & Slem, 1994). Zhu and Chen (2016) also present that there are differences between R&D teams and other teams. For example, they state that R&D teams usually have more autonomy than other teams, and hence have more freedom in deciding how and when to work. They also mention that the work of a R&D team is knowledge-based and that several workflows could exist at the same time influencing each other

A problem regarding teams in R&D organizations appears when it comes to evaluating the team. R&D tasks are often complex, the tasks are perhaps not properly defined with clear goals, and difficult to measure. Therefore, it is difficult to understand if a task’s success or failure came from the effort and work from the team members or if it was due to the nature of the task (Levi & Slem, 1994). This is also mentioned by Sheard and Kakabadse (2002), who say that teams are best used for complicated tasks, meaning that there is also a significant risk that the teams’ objectives cannot be met, and leading to failure of the task. Furthermore, in R&D organizations there are often a matrix management structure, meaning that the team members have both a project manager and a functional manager, and both of these take part in the evaluation process of the individual team member (Levi & Slem, 1994). This might create an unfair performance evaluation, since the employee needs to consider what both managers find important. This can hence create a difficulty in prioritizing the teamwork (Levi & Slem, 1994). Levi and Slem (1994) found in their study that many R&D employees did not find themselves rewarded for their effort in the team, and they were

more evaluated on their performance outside of the time spent in the team. This can create less incentive to work efficiently in the team and less incentive to increase the team's outcome.

3.3 The creation of High performance teams

This chapter will cover the perceptions and definitions of high performance teams from different researchers' point of view. Typical characteristics features and themes of high- performance teams are presented, which are found in studies performed during three different researches. The first research presented is Susan Wheelan's view of teams and how to create a high-performing team, followed by a description of Hoegl & Gemundsen's study of teamwork quality within software development teams in Germany. Lastly, two American professors', Ammeter & Dukerich, study regarding high performing teams and what distinguish them is presented. Following this chapter are descriptions of what it implies to be Agile, using Scrum or being self-organized as a team, since these aspects are often mentioned when discussing high performance teams.

3.3.1 Susan Wheelan's studies

Susan A. Wheelan, professor in psychology, has written a book called "Creating effective teams" where she discusses how an efficient team is not only about increasing the profitability but about creating a human, interesting, varying and stimulating workplace for the team members. Wheelan (2013) points out that it is of importance to be patient while working in teams, that she has never encountered any high performance teams that has not been working together for at least six months and that along the way conflicts within the groups are healthy since it enhances the development.

3.3.1.1 The four stages of developing a group to a team

According to Wheelan (2013) a group pass through four different stages from developing a group to a team. The greatest purpose for developing a group is to create a unit that is capable of working efficiently and productively together to achieve specific goals. Therefore, leaders need to identify in which stage their group is, to be able to develop it and adjust their leadership accordingly. The four stages will be presented below.

1. Belonging and Security

The goals for the first stage are to create a sense of belonging to the group and develop the members' loyalty towards the group. When the group has achieved these goals as well as created an environment where the members feel secure in proposing ideas and suggestions, the group has passed the criteria for the first stage. It is normal that the members feel very dependent of the leader in this stage.

2. Opposition and Conflict

The goal for the second stage is to develop common goals, values and processes. Normally a lot of conflicts occur during this stage, when the members try to disengage from the dependence of the leader and develop consentaneous goals. It is of importance that the conflicts do not become personal but are related to the tasks they are to perform. To be able to reach stage three and better collaboration the group first needs to solve the conflicts and develop and agree upon their purposes.

3.Trust and Structure

The goals for the third stage are to consolidate positive relations between the members as well as perform more mature negotiations regarding roles and processes. In this stage the team members are striving to enhance the communication within the group and focus changes toward performing the tasks instead of spending time regarding questions related to status, power and influence.

4.Work and Productivity

There are four goals presented regarding what to accomplish at stage four. These are; to execute the work well, to make informed and well-grounded decisions, to maintain unity while encouraging work-related conflicts and to continue being high-performing in the long run. In this stage the focus lies on efficiency and productivity, and it is in this stage that the team becomes high-performing. There are thirty four aspects that identify a team in stage four, according to Wheelan (2013). Some examples of these are: that the members are well aware of the team's goals, the members are well aware of their roles, the communication-structure matches the assignment's requirements, the team is characterized by strong unity and that the team spends enough time discussing problems and decisions.

3.3.1.2 Ten keys to productivity

Susan Wheelan has worked with researched groups and teams during forty years, which indicates that she has gathered a lot of information regarding how a team becomes high performing and what characterizes such a team. Presented below are ten keys that groups should focus on in order to reach high productivity (Wheelan, 2013).

Table 4 The ten keys to productivity according to Wheelan (2013)

Ten keys to productivity
Goals
Roles
Mutual dependence
Leadership
Communication and feedback
Discussion, decision making and planning
Implementation and evaluation
Norms and individual differences
Structure
Collaboration and Conflict management

Goals- the team members should have a clear picture of the team's goals. The common problem in this category is that most members know what the goal is but they have different comprehension regarding what needs to be done to achieve that goal. Therefore, it is of importance that the team sit together to discuss their goals to get a clear picture of that everyone understands them and agree up on their significance.

Roles- When the team has made the goals clear they should start organizing to enable them to reach the goals. This normally includes deciding what needs to be done and which team member is doing what. The way in which the tasks are divided is not of importance, however there are three important matters: that each member knows what role he/she is asked to take, that each member has the skills to perform their assigned task, and each member has to agree upon and accept their given role. The requirements might seem obvious, but they are not in many organizations. The problem especially occurs in the occasions when a person volunteer to perform a task. Not a lot of people argue regarding if this person is the best for the task, since they volunteered, and this is when the task can be inefficient performed.

Mutual dependence- This subject refers to the importance of working within teams or sub-groups while performing the tasks, mainly since having several persons will assure that the work is done in a more adequate way than if just performing it individually. A team can take in several viewing points and more firmly review the work done.

Leadership- What is described as most important as a leader according to Wheelan (2013) is that the leadership style should be able to change in accordance to the needs of leadership that are expected from the team. As the team develops and becomes more high performance the leader should become less controlling and more consultative.

Communication and feedback- In a high performance team there should be an open communication between the team members. No matter what status, gender, title, ethnicity etc. you are a part of, you should be able to speak your mind. Regular feedback regarding the efficiency and productivity should be handed to the team members, which include the members giving each other feedback. The feedback will lead to continuous improvement and development of the individuals and will help to reach their goals.

Discussion, decision making and planning- The team should spend some time planning how they are supposed to solve problems and make decisions. There should be a discussion among the members on what the problem really is and how they all define it. Before a decision is made all members should have a clear picture of the solvation and a mutual understanding that this is the best approach. If not enough effort is put into discussion before the decision is made, the decision can become inadequate.

Implementation and evaluation- High performance teams implement the decisions and solutions made by the team. This indicates that the team pursues their decisions and are hold responsible to act according to what has been decided. Further, successful teams should evaluate their decisions and solution, to be able to find inadequate solutions and fix them.

Norms and individual differences- This paragraph describes the importance of having norms within the team that encourage performance, quality and success. These types of norms encourage the team to be creative and innovative, which are factors for reaching success. Another feature in high performance teams is the

fact that each team accept and respect team members that behave in a specific way as long as their behavior benefits the team's ability to perform the task. Successful teams consist of people that tolerate or even like members' peculiarity to get the job done.

Structure- Regarding the structure of a high performance team Wheelan (2013) names three factors that are of importance. The first is that successful teams should consist of the least amount of members required to perform the task. According to a study, where Wheelan studied 329 work groups, the ones that consisted of three to six members were significantly more productive than the larger groups. Secondly, the members of a team can build subgroups within the team to get the job done. And thirdly, these subgroups are not seen as threat for the members who are not a part of one, but they are accepted and appreciated for their contribution to the team. Furthermore, the team should spend a lot of time together, both in meetings and outside of meetings, but also during a longer period of time. According to another study, performed by Wheelan (2013), a team should work together at least eight till nine months to be able to reach a high efficiency. According to Wheelan (2013) it is up to each team to decide how often and how long each meeting should be, since it depends on how complex the team's goals are.

Collaboration and conflict management- Wheelan (2013) writes that high performance teams are built upon collaboration. However, collaboration is not enough to make a team efficient, all the factors named above must be present too, but without collaboration there is little chance of success. Also, collaboration does not mean that there will not arise any conflicts in the team. Wheelan (2013) defines conflicts as usual but short hold within a high performance team, short hold since the team should have effective methods for conflict management.

3.3.2 Hoegl and Gemundsen's studies

Hoegl & Gemundsen are two German professors that have done extensive research regarding the creation of high performance teams. Hoegl is the head of the institute for leadership and organization at LMU Munich whereas Gemundsen is a professor in project management at BI Norwegian Business School. In 2001 they performed a research where they were looking at the relationship between the teamwork quality and the team performance (Hoegl & Gemundsen, 2001).

Hoegl & Gemundsen (2001) have defined team performance as "the extent to which a team is able to meet the established quality, cost and time objectives". The team performance can be divided into two variables; effectiveness and efficiency. The effectiveness can be described as to what degree the team's work reaches the expected quality of the outcome and the efficiency is related to the team's adherence to the budget and time-plan for the project. Therefore, it can be said that the effectiveness is related to the output whereas the efficiency is related to the input.

Hoegl & Gemundsen (2001) has conceptualized the term teamwork quality into a six-faceted higher-order construct, which are communication, coordination, balance of member contribution, mutual support, effort and cohesion. The conceptualization is based on the research done by Hoegl & Gemundsen in 2001 where they used the empirical data and arguments from 575 members, leaders and managers from 145 German software development teams. It is proposed that highly collaborative teams show behavior that are related to all six facets.

3.3.2.1 Teamwork quality

Since this research paper is covering the topic high performance team, the information regarding the teamwork quality is of interest here. Hoegl & Gemundsen (2001) have further described the teamwork quality construct and how they defined it.

Communication

Regarding communication Hoegl & Gemundsen (2001) formulated the question: “Is there sufficiently frequent, informal, direct and open communication?” Frequent is related to how often the team members talk to each other and share information. Informal is related to how easy it is for the members to communicate, if they have to set up meetings to reach their team members or if they can talk in the hallway, chat etc. It is of importance to have a lot of informal communication within innovative projects so that ideas easier can be discussed and evaluated by team members. The team should openly and direct communicate, since a lack of open interaction hinder the integration between the members’ knowledge and experience.

Coordination

Regarding coordination Hoegl & Gemundsen (2001) formulated the question: “Are individual efforts well-structured and synchronized within the team?” The team should have clear sub-goals for each member to avoid gaps and over-laps regarding the tasks. The team should have an agreement on how to structure their tasks, schedules, budgets and deliverables.

Balance of member contributions

Regarding member contributions Hoegl and Gemundsen (2001) formulated the question: “Are all members able to bring in their expertise to their full potential?”. It is of importance that each member of the team can provide knowledge and experience related to the team’s tasks. All the members should also have the opportunity to present their ideas, participate and be heard.

Mutual support

Regarding mutual support Hoegl and Gemundsen (2001) formulated the question: “Do team members help and support each other in carrying out their tasks?” The members should think in a cooperative mindset instead of competitive since it is more productive. Each member should offer the other members assistance when needed, display mutual respect and help develop other members’ ideas.

Effort

Regarding effort Hoegl and Gemundsen (2001) formulated the question: “Do team members exert all efforts to the team’s tasks?” The members should prioritize the team’s tasks over other duties, hence it is indicated that the effort is put on the common task.

Cohesion

Regarding cohesion Hoegl and Gemundsen (2001) formulated the question: “Are team members motivated to maintain the team? Is there team spirit?” There is little chance of good collaboration if the members lack a sense of belonging to the team and do not wish to stay in the team.

Hoegl and Gemundson asked the 575 people in the study to rate the team's performance from the teamwork quality and the results showed that the teamwork quality was significantly associated with the team performance, but that the result depended upon who rated it; the team members, leaders or managers. Hence, the six aspects presented above is of importance also for performance.

3.3.2.2 Autonomy's effect on team performance

Hoegl also performed a research together with Parboteeah in 2006 where they studied how the autonomy within a team affected the teamwork quality (conceptualized by Hoegl & Gemundsen 2001) in innovative projects. The researchers conducted two hypothesis which they tested by questioning 430 team members and team leaders in 145 software development teams. The results supported their hypothesis which indicated that team-external influence in project decisions would negatively affect the teamwork quality and likewise that team-internal equality of influence in the decision making would positively affect the teamwork quality (Hoegl & Parboteeah, 2006). The results indicate that in innovative project, the team-external managers should not interfere with the team-internal operational decisions.

3.3.3 Ammeter and Dukerich's study

Ammeter & Dukerich are two American professors, Ammeter with a PhD within organizational science whereas Dukerich has a PhD in organizational behavior, who in 2002 performed a study where they interviewed 51 individuals from eight high performance teams to acquire a deeper understanding of what made these teams high performing, from the members' perceptions. Ammeter and Dukerich (2002) describe a high performance team as a team that outperform their scheduled performance and has a low project cost, which indicated that the team is performing faster than planned and does not spend more money than the project budget.

The teams that Ammeter and Dukerich were focusing on were project teams within twelve different industries from various geographic location in the US and Canada. Each team consisted of 5-10 members with typically diverse functional background (Ammeter & Dukerich, 2002). When looking at the results from their interviews, Ammeter and Dukerich (2002) could identify nine themes that recurrently showed up among the team members' answers, and they chose to look deeper into these topics. The nine themes are presented in table 5 below together with the percentage of in how many interviews the interviewee mentioned them.

Table 5 The themes found in the research by Ammeter and Dukerich

Theme	Percentage (%)
Team orientation, sense of belonging	71
Critical Leader Behaviour	67
Team communication, frequent team meetings	61
Ownership: sense that personal success is directly tied to project's success	47
Location: colocation and/or physical isolation of team	43
Performed team building informal/formal	43
Competition, sense of competition with other or previous projects	35
Rewards or bonus excellence, use of team perks	25
High level support: sponsorship/high profile/high visibility of project	20

Based on the comments from the team members the project leader's most important role is to communicate the goals and values that are desired from the team, present the objectives and make sure that the team communicates. Regarding the team communication, the team members pointed out that the team should have a meeting at least weekly and that the team building is of great importance in developing a team spirit (Ammeter & Dukerich, 2002).

After finding these themes the researchers used a more quantitative research method and conducted a pencil-and-paper survey to be able to test the significance of these nine topics, and thereby apprehend if these themes were related to high performance in various teams. The survey was sent to other project teams within the construction industry and it resulted in 278 answers. When analyzing the results from the survey it was only the leader behavior that significantly was shown beneficial for both the scheduled performance and project cost, which in this research was related to the performance of the team (Ammeter & Dukerich, 2002).

3.4 Agile Software development

Agile Software development represents a new way of planning and managing projects, especially within software development (Larman & Vodde, 2009). Agile is included in this research since the research object is a company working within software development and since there are teams in some divisions at the research company that are working in an Agile manner. Therefore, it is of interest to investigate whether this Agile approach could be of interest for the research object and their path towards a more productive way of working.

The focus of Agile software development is the following aspects; people and teams, delivering high-quality releases frequently, high level of customer collaboration, being able to change quickly and plan as little as possible upfront (Appelo, 2011). There are different tools and methods used in order to be Agile, such as Scrum or Extreme Programming (Appelo, 2011). Hence, Agile is not something that is done, instead tools are used in order to become Agile.

Larman and Vodde (2009) writes that the dictionary definition of Agile is “ready ability to move with quick easy grace”. This implies that the thought of Agile is to master the action of change, and therefore being able to change more quickly than the competition can. The definition does therefore not imply being faster at delivering, having higher productivity, higher quality or fewer defects. These aspects might however be reached when working with Agile practices or tools, but the basic thought about being Agile is to be able to change and being adaptive.

3.4.1 The Agile Manifesto

One of the basic aspects when talking about being Agile is the Agile Manifesto. The manifesto provides four key concepts and twelve principles, explaining the thoughts about what it means to be Agile. The key concepts are (Beck et al., 2001):

- *“Individuals and interactions over processes and tools*
- *Working software over comprehensive documentation*
- *Customer collaboration over contract negotiation*
- *Responding to change over following a plan”*

It is important to notice that the manifesto mention that the items which are written to the right are also valued, but that the ones to the left are given a higher value (Beck et al., 2001).

Furthermore, Beck et al. (2001) writes about the principles that are important to follow in order to be Agile. The ones that are related to teams and effective working are presented below:

- The frequency of delivery, which should provide working software with short timescales in between, from a few weeks to a few months.
- Having motivated individuals in the projects, as well as providing them with the support needed and to trust that they can complete the job.
- How to provide information to the development team, as well as within it. It is preferable to have face-to-face conversations, since these are the most efficient and effective.
- Having self-organized teams, as these provide the best architectures, requirements and designs.
- Reflecting on how the team can become more effective. This should be done regularly and the outcome should be used to adjust the behavior of the team.

3.4.2 Agile Teams

An Agile team is a cross-functional team that consist of 5-11 members (Scaled Agile Framework, 2017). The team should include everything and everyone that is needed in order to define, build, test and deploy software or hardware (Cottmeyer, 2015). This implies that the team includes all competences needed, both technical such as programming, and business such as decision making ability (Agile Alliance, n.d.). The people should be dedicated to one team and not move across teams due to demand (Cottmeyer, 2015). Agile teams are empowered, self-organizing and self-managing. Self-organizing teams will be further explained in its own paragraph later in this chapter. Self-managing implies that the team decides what components and features they can build in each increment, and not the managers. Hence, the Agile leaders should provide the team with the vision and the leadership and autonomy that is needed to foster and promote high-performing team. The leader’s primary role in an Agile team is hence to coach and mentor the team (Scaled Agile Framework, 2017). Generally, Agile teams use Agile practices in their daily work, such as Scrum,

kanban or extreme programming. Collaboration, communication and fast, effective and empowered decision-making is of importance in Agile teams for them to fulfill their responsibilities. By giving each member feedback on regular basis the collaboration continuously improves. The team is recommended to have daily communication, which often include daily stand-up meetings (Scaled Agile Framework, 2017).

3.4.3 Scrum

One of the tools possible to use when working with Agile is Scrum. In the article “The Scrum Guide” written by Sutherland and Schwaber (2013), Scrum is defined as: “A framework within which people can address complex adaptive problems, while productively and creatively delivering products of the highest possible value”. Scrum is used to help and bring transparency to the project planning and implementation (Sutherland 2010). It is a method to increase the development speed and assure communication about performance. There are several important aspects to consider when working with Scrum, such as different roles within the team and how to conduct the daily work. Here, a brief description of some of these aspects will be provided.

3.4.3.1 The roles within a Scrum team

One important thing to acknowledge is that there are three different roles in a Scrum team. First, there is the Product Owner (PO). The PO is responsible for maximizing return on investment of the product, receiving inputs about the product and thereafter turning these into a list of features in need of being produced (backlog), and prioritizing these tasks. The second role is the team. They are the ones who develop the products through the features given by the PO. The team should be self-organized and cross-functional and contain all the knowledge required to deliver the product in each sprint (described later in this chapter). The team members decide how to accomplish the work, without input from any team manager. The team should consist of between 5-9 people, and it is preferred that the team members are not exchanged. The final role is the Scrum Master. The function of the Scrum Master is to facilitate the work of the team, by removing obstacles, organize meetings and hindering interruption of the team’s daily work. The Scrum Master also educates the team and the PO to ensure they follow the practices of Scrum, as well as helping the organization in possible difficulties when beginning to work in an Agile manner (Sutherland, 2010).

3.4.3.2 The backlog and sprints

Other important aspects of Scrum is the product backlog and the sprint. The product backlog is a list of the tasks required to perform in order to produce the product. The tasks are prioritized with the, at the moment, most important tasks at the top of the list. The backlog is changed during the lifetime of the product since tasks are removed, added or received a new prioritization. The sprint on the other hand, is the way in which time is structured. A sprint is normally 1-4 weeks, where the final date is fixed and do not change, even in the case of unfinished work. Before each sprint a meeting is held with all the members of the Scrum team together with the PO and Scrum Master. Here, the sprint is planned and the goals and backlog are discussed, and the tasks to be performed within the following sprint are chosen. After each sprint, a review is held to discuss what has been done during the sprint, and what to do next. For this meeting, there can also be stakeholders present. Afterwards, a retrospective is held where the team discusses what was good during the sprint and what did not work well, to come up with possible changes. Another important part of Scrum is the daily meetings. These are short meetings at a predefined time each day, where the team updates each

other on their progress, and required changes or discussions can then follow from the meeting (Sutherland 2010).

The aspects mentioned above are some of the most significant for working with Scrum. There are several things to keep in mind regarding these aspects and others when it comes to working with Scrum, but these provide an overview of some of the most important parts.

3.5 Self-organized teams

Another term which is often mentioned when discussing teams and high performing teams is self-organization. Self-organized teams implies that the teams themselves have the authority to make decisions about how to design and plan their work as well as how to execute it. Also, they both monitor and manage how they are progressing and how their work processes are performed. This means that the authority as well as the responsibility to make the decisions regarding how the team works is assigned to the team rather than to a project manager (Larman & Vodde, 2009). According to Levi and Slem (1994), using self-organized teams, moves many of the functions regarding management and supervisory from leaders to the team. This leads to a reduced need for managers in the middle level or supervisors of the team. Larman and Vodde (2009) describe the use of Scrum, and also talks about the importance of having teams that are self-organized in order for the Scrum approach to work. Moe & Dingsoyr (2008) point that self- organization directly can affect the team's effectiveness since the speed and precision of the problem solving is increased due to the decision making authority is moved to an operational level.

Furthermore, the different responsibilities of being a leader should be divided among the team members, so that the situation determines what team member takes more or less leadership role in a specific moment. Hence, all team members have the possibility of having the leadership role, and the leadership changes within the team. It is important to notice that when a traditional way of leading, with a designated manager, is changed into having self-organized teams, the role of the traditional manager is switched from deciding and directing how the team should work, into creating an environment where the self-organizing approach is possible. The organization needs to support the team for it to become self- organized, since it does not occur without that support (Larman & Vodde, 2009).

Another description of self-organized teams is given by Hoda (2011). She writes about Nonaka and Takeuchi who were some of the first people to describe self-organized teams in their paper "The New New Product Development game". According to Nonaka and Takeuchi, there are three requirements for self-organized teams, which are:

- Autonomy
- Cross-functionality
- Challenges

A team reaches autonomy when the senior management provide the team with freedom to manage and take responsibility for their tasks. Further, the senior management do not interfere in the team's day to day activities (Hoda, 2011). Cross-functionality is reached when the team is composed of people with individual specializations and behavior patterns and where their interaction leads to a better understanding of each person's perspective (Hoda, 2011). This means that each team member's efforts are necessary for the team

to achieve their purpose (Larman & Vodde, 2009). An ideal cross-functional team includes all types of members that are needed to ship the product, which is often impossible within larger product development. Instead, according to Larman and Vodde (2009) the first step for organizations is to integrate analysis, interaction design, software architecture, programming and testing. However, to become faster and more Agile the organization will have to integrate other functions in the teams in the long run (Larman & Vodde, 2009). Challenges refers to the team setting their own challenging goals and evaluate themselves to be able to establish better and more efficient ways of reaching these goals (Hoda, 2011). Challenging goals forces the team to cooperate, learn and work together as a team, which will lead to synergy effects and thereby the team performing better together than the sum of the individual contributions (Larman & Vodde, 2009).

3.5.1 Self-organized teams within Agile Manifesto

Self-organization, or self-organized teams, are a part of the Agile Manifesto and has been defined as one of the critical factors for performing successful Agile projects. Hoda (2011) quotes that a self-organized Agile team is composed of *“individuals (that) manage their own workload, shift work among themselves based on the need and best fit, and participate in team decision making”* (Hoda, 2011, p. 29). Sutherland and Schwaber (2013) explains that the Scrum Team should be self-organized and cross-functional. Self-organization in this matter refers to the team themselves choosing what is the best approach to accomplish their work without depending and being directed by people outside of the team. Further, the cross-functionality means that the members of the team have all the competency that is needed to perform the work, without depending on people from outside the team (Schwaber & Sutherland, 2013). However, self-organized Agile teams are not teams with no leaders that are uncontrollable (Hoda, 2011). The leadership within a self-organized team should be light touched, meaning that it should be adaptive, provide feedback and give a subtle direction- but also motivating the team.

3.6 Obstacles in becoming a High performance team

Not surprisingly, there are both barriers and obstacles hindering the development of teams and hence their performance. The hinders differ depending on what team, but some features can be described that often cause problems. One example is to not have clear goals, which creates confusion and a lack of direction. This is a great problem since the performance of the team is greatly connected to understanding the purpose of why the team exists. Another obstacle is that there might not be enough commitment to the performance of the team, or that this commitment is different between members. Some other problems can be insufficient feedback, personality conflicts, or a general unwillingness to change or to work in teams (Castka et al., 2001).

Wheelan (2013) points out that not all teams are developing in the right direction, there are a lot of circumstances that can lead the group forward or make them take a step back. Normally change of members, change of external demands or new leaders can affect the group's performance and often lead to a change in the groups structure and culture. Not all groups reach high efficiency and productivity since they are not working in the right circumstances. Up to 90 percent of all groups have a problem with their performance and the ones with the greatest problem are those with members from different professions. Deficient organizational frame, communication problems and that the members monitor their professional territory are the most common hinders in these situations (Wheelan, 2013).

3.6.1 Reluctance towards working in teams

According to Katzenbach and Smith (2003), there are three main reasons for people being reluctant towards working in teams. The first one is situations where people are not convinced that a team can create better results than what is possible to achieve by working in an alternate way, such as individually. In some cases, people believe that working in teams is a waste of time due to the time spent discussing or in meetings. According to those people, having teams hence creates more problems than value.

The second reason is the feeling that working in teams can be risky or uncomfortable due to a person's characteristics, such as capabilities, preferences or style. People might feel that working in teams would give them a slower advancement, or they are not comfortable in participating in a group. Another reason is being dependent on the other members and agreeing to other people's opinions. One reason for this is that most people, from the time they are young, learn to favor individual performance or responsibility over that of a group. For example, in school, grades are provided based on individual performance, and the same applies for rewards or punishment. Therefore, performing in a group or team can create anxiety (Katzenbach & Smith, 2003).

The third reason for being reluctant towards working in teams is when the organizational performance ethics is weak, which then discourage the environment needed in order for the teams to reach their potential. Also, this type of ethics demonstrate that the organization is more concerned with the internal politics or external public relations rather than using their effort to balance the expectations from different stakeholders such as customers, employees or shareholders through ensuring common and clear goals. The consequence of this type of ethics could be a lack of mutual trust and openness, which is needed for teams, and also to put focus on politics instead of performance. From this, the individual insecurity could be affected and lead to a reduced confidence in investing in a team approach (Katzenbach & Smith, 2003).

3.6.2 Organizational structure and culture

Another main obstacle mentioned in the article about Castka et al. (2001) is the already existing work structure. The problem is that most work structures are based on the use of individuals and standardization. In the article, some of the examples mentioned are the way in which jobs are described, decisions on compensation and evaluations on performance as well as that career paths are often aimed at individuals rather than teams, and therefore does not emphasize the importance of teams. This creates problems such as not knowing if to focus on the responsibilities of your own job description or on those of the team. Furthermore, another aspect mentioned in the article by Castka et al. (2001) is that if the team is not trained well or composed in the right way, critical skill gaps will be created, which will lead to a lower level of performance. Hence, training the team is very important for them to know how to work in the best possible way.

Moreover, according to Levi and Slem (1994), the corporate culture regarding support of teamwork is one of the most important aspects in order to have successful teams in R&D organizations. In order to have this support, the culture needs to support employee involvement and participation. When an organization has this type of culture, managers will be less resistant towards using teams and there will be better relations between the organization and the teams. This then increases the usage of teams in the organization. Wheelan (2013) dedicates a whole chapter in her book to the importance of the organization supporting teamwork

for the team to perform well. Some of Wheelan's (2013) recommendations are to reward the team instead of the individuals, to formulate clear performance goals and what is expected from the team and as well to train the members into becoming competent team members. Furthermore, having an organization in support of teamwork and the team is especially important when considering self-organizing teams. This is since the team in this case does not have a specific manager who has authority known in the rest of the organization. The lack of this aspect makes the support from the organization extra important (Levi & Slem, 1994). Wheelan (2013) emphasizes that an organization regularly should review their support to teamwork, where the team should sit down with external units that in some way integrates with the team and discuss the organizational support and come up with changes if needed.

3.6.3 Problems and benefits of the importance of organizational culture

The problem with the culture being so important is the difficulty in creating it. It is a long process to change an organization's culture to make it more supportive towards teams, and it does not occur as a result of only a management decision. Instead it requires that the management encourage involvement by employees as well as teamwork and assure that the employees understand that these things are valued. Management needs to use communication as well as action in order to create this understanding. However, the positive side of the cultural dependency for successful teams is that once the supportive culture is established, this culture will support many types of teams and also help to create self-managing teams. Having this wider support helps the organization to try different types of teams to see what type is the best in order to make the organization successful (Levi & Slem, 1994).

3.7 Comparison and compilation of the presented theory

In several aspects, these authors have common thoughts or results of what is needed in order to become high performing as a team. Some aspects are only mentioned by one of the sources, while some appear in many definitions. To create an overview of the definitions, table 6 is presented below. The table consists of the aspects which have been mentioned by at least two sources. From these aspects, eight categories have been created; Goals, Mutual Support, Leadership, Communication, Planning & Coordination, Evaluation & Feedback, Sense of Belonging and Roles. Apart from Wheelan, Hoegl and Gemundsen and Ammeter and Dukerich, aspects mentioned while considering Agile or obstacles towards reaching the high performance state is also included in the comparison. Through this comparison, the aspects found most important from the theoretical study is provided and the description of each aspect is compiled and presented.

To further deepen the connection of the aspects mentioned in table 6 to theory, it should be mentioned that some other definitions has been found during the literature search which also mentioned some of the same aspects in their definitions of high performance teams. One definition is given by Katzenbach & Smith (2003), saying that high performance teams has "a deeper sense of purpose, more ambitious performance goals, more complete approaches, fuller mutual accountability, interchangeable as well as complementary skills". These aspects partly derive from a stronger sense of commitment to the team members, where people care about the success and growth of the other members. Below a further comparison is made, where the aspects from the table with theory is underlined.

Table 6 A compile of the theory in the theoretical framework, sorted by the most frequent mentioned aspects and the description of these

Aspects/ Author	Wheelan	Hoegl & Gemundsen	Ammeter & Dukerich	Obstacles	Agile
Goals	Clear picture of goals. Discussions should be held to avoid different comprehensions of goals, this should be done in stage 2 according to Wheelan's theory. To be high performing the team must be well aware of goals and roles.	Each member should have clear sub goals.	Leader should communicate the team's goals and values (part of the coordination).	Not having clear goals --> confusion and lack of direction.	
Mutual Support	Lack of collaboration leads to less chance of success. Working together leads to many viewing points, better review and is more adequate than individual work. Spend time together both in and outside of meetings.	Members should have a cooperative mind set and offer assistance and help develop member's ideas.	Location of the team- isolation or colocation, to keep the team gathered		
Leadership	The leadership should change along the way depending on the stage of the team, from controlling to consulting.	Autonomy is important, teamwork quality was increased when the team had autonomy.	Leader behaviour is critical. The leader should communicate goals and values and make sure that the team communicates.		Self-organized and self-managing teams are significant aspects of Agile teams
Communication	There should be open communication to enable having participation. The communication structure should match assignment requirements.	The communication should be open, direct, informal and frequent. The member contribution should be balanced meaning that participation is important, as well as being heard and being able to present ideas.	Regarding the team communication, the team should have frequent meetings. The leader should make sure that the team communicates.		Communication should be face to face. There should be a principal regarding how to provide information both to the team and within the team. Using Scrum assures communication about performance, provides transparency and assures daily communication.
Planning and Coordination	There should be discussions regarding the plan of how to solve problems and how to make decisions. All members should understand the problem and have a mutual understanding of the solution.	The team should have discussions on how to structure tasks, budgets, schedule and deliverables.			
Evaluation & Feedback	The team should evaluate their decisions and solutions. They should also give each other regular feedback. Regular feedback regarding the efficiency and productivity should be handed to the team members, which include the members giving each other feedback. The feedback will lead to continuous improvement and development of the individuals and will help to reach their goals.			Insufficient feedback is an obstacle to become high performing.	Reflections on how the team can be more effective and then adjust behaviour according to those reflections. It is important to provide regular feedback.
Sense of belonging	High performance teams should have strong unity. It is important to create relations between members. At stage 1, they should get a sense of belonging. At stage 4, a goal is to maintain unity within the team.	Cohesion of the team is important. Having a team spirit and a sense of belonging to the team is central to reach good collaboration.	Team orientation and sense of belonging was the most frequent mentioned theme regarding high performance teams in the research. The team can gather team spirit from team building. The members should feel ownership of their tasks and feel personal success when succeeding, since it creates sense of belonging to the task.	Not having commitment from members to the team is a hinder in becoming a high performance team. Not wanting to work in a team or not having faith in team work are other obstacles.	The members should be dedicated to one team, and not move around between teams.
Roles	All have clear roles in the team. The members should accept their roles and also have the right skills for their roles.	Each member should bring knowledge and experience to the task and have a role in the team, since this is a part of balancing member contribution.			

The first aspect of Katzenbach and Smith's (2003) definition which correspond to the aspects in the comparison above is the mentioning of performance goals. Here Katzenbach and Smith (2003) mention that to create a common and meaningful purpose, it is important to reshape broad directives to performance goals which are specific and measurable. The aspect of more complete approaches corresponds to Planning & Coordination. Secondly, the aspect regarding the interchangeable and complementary skills correspond to that of Member Contribution in the comparison in table 6. Katzenbach and Smith (2003) writes that the team needs to have the correct mix of skills, and divide the needed skills into three categories. The first consider functional or technical expertise, the second is skills regarding how to solve problems or how to make decisions, and the third category is interpersonal skills. This correspond to Evaluation and Feedback, since it among other things mention support and helpful criticism.

Another definition is given by Colenso (2000), who defines high performance teams by using preconditions and characteristics. The preconditions are purpose, empowerment, objectives and support, while the characteristics are interpersonal skills, decision making, participation, creativity and managing the external environment. Some of these aspects can also be found regarding Goals, Mutual Support, Communication and Planning and Coordination in the theory-table.

3.8 Employee motivation

When having read all theories above regarding high performance teams the word motivation has not been mentioned once, which seems peculiar by the authors of this thesis. Since motivation has been mentioned in many of the conducted interviews and since the authors have a perception that employees' motivation at work do affect their work performance in teams, this section has been written to take motivation into account as well.

In their article, Castka et al. (2001) presents an equation elaborated by Stott & Walker in which performance is described as a function of motivation, ability and environment. The equation (1) is presented below:

$$Performance = f(motivation * ability * environment) \quad (1)$$

The ability refers to someone having the skills and knowledge needed to perform the task and is often related to the word effectiveness. Motivation is defined as: *"the desire to achieve a goal or a certain performance level, leading to goal-directed behavior"* (Bauer & Erdogan, 2012) When referring to someone as motivated it often means that the person is working hard to execute their task. The environment refers to environmental factors such as information, resources and support, which needs to be available for the personnel when performing a task and will otherwise affect the performance (Bauer & Erdogan, 2012). It is good for an organization to look at the performance equation and reflect upon what they are missing and thereby what they need to focus on to increase their employees' performance.

Dobre (2013) has written the article "Employee motivation and organizational performance" in which he indicates that when given empowerment and recognition employees feel more motivated which increases their motivation to work and their accomplishments, which can be referred to the performance (Dobre, 2013). Empowerment imply that the employees are given the authority and freedom to make decisions and have control over their job. However, there is a challenge for the management to find what motivates their

workers since all people are driven by different things, and to sustain the motivation once it is found. The career analyst Dan Pink has given a TED-talk regarding motivation. In this he brings up that financial incentives, which are common in the US, can have a negative impact on performance, which indicates that the reward and punishment system does not work to increase the performance. Instead Pink (2009) proposes another approach in which autonomy, mastery and purpose are the leading words that an employee need in order to be motivated. Autonomy is the desire to direct your own life. Mastery is the person's desire to get better at something that matters and purpose refers to the meaning to do what we do in the service of something larger than ourselves (Pink, 2009).

3.8.1 The psychology of self-motivation

Scott Geller, an American professor in psychology, has done research regarding self-motivation and thereby what inspires people to do things because they want to (Geller, 2013). Self-motivation is when someone feels empowered and it can be found out by asking oneself three questions and if the answer on all three questions is yes, then they are self-motivated. The questions are:

- Can you do it?
- Will it work?
- Is it worth it?

These are all three motivational questions that can be explained with four words, that all start with a C; consequences, competence, choice and community (Geller, 2013). Since we were born we have done things because we get something for doing it, and that is what consequences refers to in this sense, if the consequences are good enough it is convincing to do something. If the answer is yes on all the above questions, it creates a feeling of being competent and when feeling competent it is as well easier to feel self-motivated. Further, choice refers to autonomy, to be able to make own decisions and choices. An interesting focus here is the choice between doing something as an avoidance of failure or when seeking success. To feel self-motivated seeking success is a greater choice than trying to avoid failure. The last c-word is community. Community are the people around an individual that offer social support. People around that give the sense of connection increases motivation and increases happiness (Geller, 2013).

3.8.2 Factors that decrease motivation

It is important for an organization to not only focus on what factors that increase their employees' motivation but as well what makes employees unmotivated at their workplace. Clark (2003) presents some practices that destroy the motivation, but still are common within many organizations. Unnecessary rules, policies and work barriers are not appreciated among workers, to increase the motivation the organizational work processes should be as simplified as possible. Further, changing goals or lack of clear performance goals and lack of feedback makes people less committed to their job and hence put less effort to their tasks. Moreover, regular feedback is necessary to ensure the professional growth among the employees. To empathize work motivation the organizational goals should follow three criteria; challenging, concrete and current. Current in the sense that they are focused on the near term, since it becomes clear what is expected from the employee and when (Clark, 2003).

3.8.3 Team motivation

Clark (2003) further describes the key features for team motivation; expertise and collaboration. Expertise in the sense that every member in the team possesses the knowledge and skills that is needed to perform the task and in this sense each member have to believe that the others in the team are able to contribute to reach the team goals. The members need to have confidence in the other members' abilities, which as well increases the teamwork. Further, collaboration is essential for the team's success which means that the team needs to consist of people who are able to work with other people. Hence, independent and uncooperative individuals should not be a part of the team since they can wreck the team motivation (Clark, 2003).

4. Part A - Empirical Data

Part A of this report covers the empirical data of this report that was collected to answer research question one. This chapter consist of the data collected from the survey that each team member filled out and a section that covers the interviews with the well-functioning and efficient teams. The survey results are part of Part A since the well-functioning and efficient teams were part of the survey as well, and these results are used in the analysis of Part A.

4.1 Data collected through survey

A survey has been a part of the data collection for this research. The survey was handed to each member of the system teams, as well as the team members from the well-functioning and efficient teams, at the end of their interviews. Wheelan (2013) presents a survey in her book, which this survey is based on. The survey is made for team members to rate their own teams within different categories, which are based on Wheelan's (2013) ten keys to productivity, presented in chapter 3.3.1.2 *Ten keys to productivity*. The template of the survey that can be found in Wheelan's (2013) book is composed of 25 questions. 21 of these were used for this research, 4 were removed since they did not suit the research questions and aim for this report. Therefore, the scores for the ratings have been adjusted to coincide with 21 questions instead of 25.

4.1.1 Structure of survey

The survey was named "Checklist for team performance" and consisted of 21 statements in which the interviewee could answer on a scale with the same answering alternatives for each question. These were: Total disagreement, Partial disagreement, Partial Agreement and Total Agreement, in which the interviewees were to fill in the answer that suited their team the most. Further, the survey started with four demographic questions, regarding who answered it, what team he/she belongs to and what subsystem he/she is a part of, to later use this information in the analysis. The whole survey can be found in Appendix I. Wheelan's (2013) intention with the survey is to be able to get a clearer picture of in what stage the teams who are answering are in. In chapter 3.3.1.1 *The four stages of developing a group to a team*, these stages are presented, in which stage four is the one where the team becomes high performing. Each answer of this survey is connected with a number, whereas Total disagreement=1, Partial disagreement=2, Partial agreement=3 and Total Agreement=4. In the end, this means that the highest score of this survey was 84 points and the lowest 21 point, if the interviewee would answer straight 4s or straight 1s. The score of each interviewee indicates which stage the team is in, the higher the score is, the better the team is. The way of calculating the score is according to Wheelan (2013) and presented in table 7 below are the scores and what stage they represent.

Table 7 The scores from the survey and what stage they represent, according to Wheelan (2013)

Total score	Group stage
71+	4
59-70	3
<59	1 or 2

4.1.2 Results from Survey

The survey was answered by 20 team members, 15 of them members of the system teams and 5 members of the well-functioning and efficient teams. The system teams are PDS, MTS, LinkE and R&R, where the members are part of the subsystems Platform, C2, Mission System and I&V. The rest of the interviewees were team members from Combitech, Volvo Cars and other divisions at Saab. In the presentation of the teams in this report, the team members and the teams will not be presented with their real name. The reason is to respect the privacy of the team members. The system teams will be referred to as Team A, Team B, Team C and Team D whereas the well-functioning and efficient teams will be referred to as Team 1, Team 2 and Team 3. Here, the members from different teams at Saab have been referred as one team and one member from Combitech has not been included in the results. The reason is since this team just started working as a team and did not live up to the expectations, hence not being well-functional and efficient. In chapter 6.1 *Empirical data of the studied System teams*, regarding the collected data of the system teams, the system teams will be referred with the same names. The subsystems will as well be referred as Subsystem 1, Subsystem 2, Subsystem 3 and Subsystem 4.

The results from this survey were used to be able to see how the team members rated their own team, if the perception of the team between the members were the same and to make a comparison of the teams, both between the system teams and between the system teams and the teams that were well-functioning and efficient.

4.1.3 Scores of each team

In figure 4 below the average score for each team is presented. Among the well-functioning and efficient teams, the highest score is from Team 1, which scored 74 points. The system teams has performed a bit lower than the well-functioning teams and here the highest score is the average of Team D, which had a score of 66.

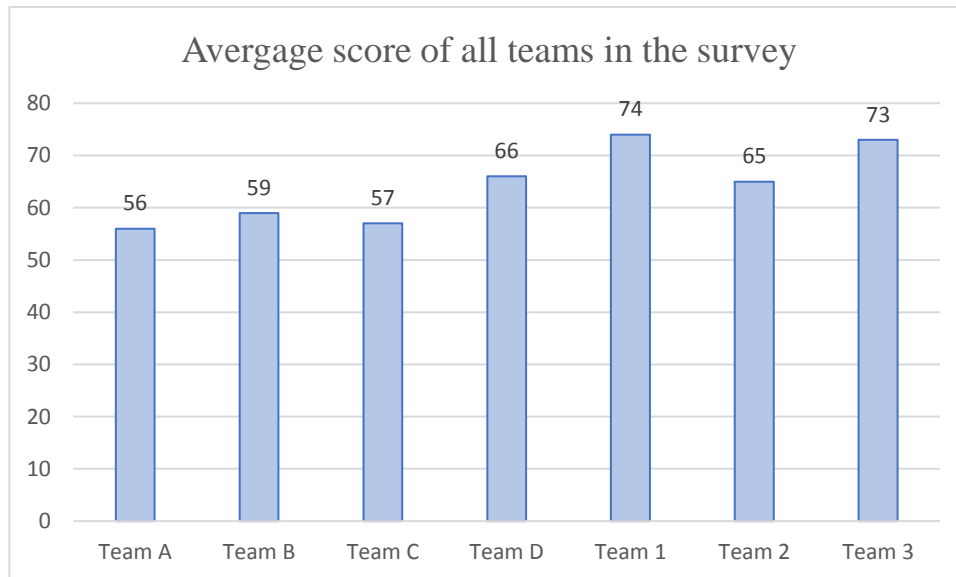


Figure 4 The average score of each team in the survey

From the scores above the different teams can be divided into the four stages presented by Wheelan (2013). How the teams performed is presented in table 8 below.

Table 8 Each team's average score and stage from the survey

Team	Score	Stage
Team A	56	1 or 2
Team B	59	1 or 2
Team C	57	1 or 2
Team D	66	3
Team 1	74	4
Team 2	65	3
Team 3	73	4

Two out of three of the well-functioning and efficient teams reached a score which put them in stage four, which is the stage in which the team becomes high performing. Two out of seven teams are in stage 3 whereas the rest are in stage 1 or 2. Three out of four system teams had a result which put them in the lowest stages as a team.

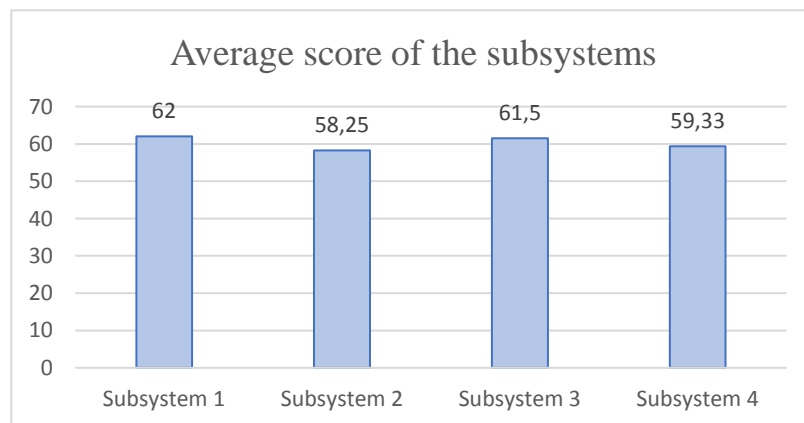


Figure 5 Average score of each of the subsystems from the survey

Figure 5 above is a presentation of the average score for the different subsystems. Subsystem 1 is the one with the highest score of 62, but when looking at all subsystems it is easy to tell that there is not that much of a difference of what they think of their team in regards to what subsystem they are part of, there are only 3,75 points difference between the highest average score and the lowest.

4.1.4 Results of the different statements

When looking at the 21 statements that all the interviewees were asked to rate, the results were clear on which practices that were perceived and rated better among the system team members. In figure 6 below the statements that were best rated by the system teams, together with their scores, are presented.

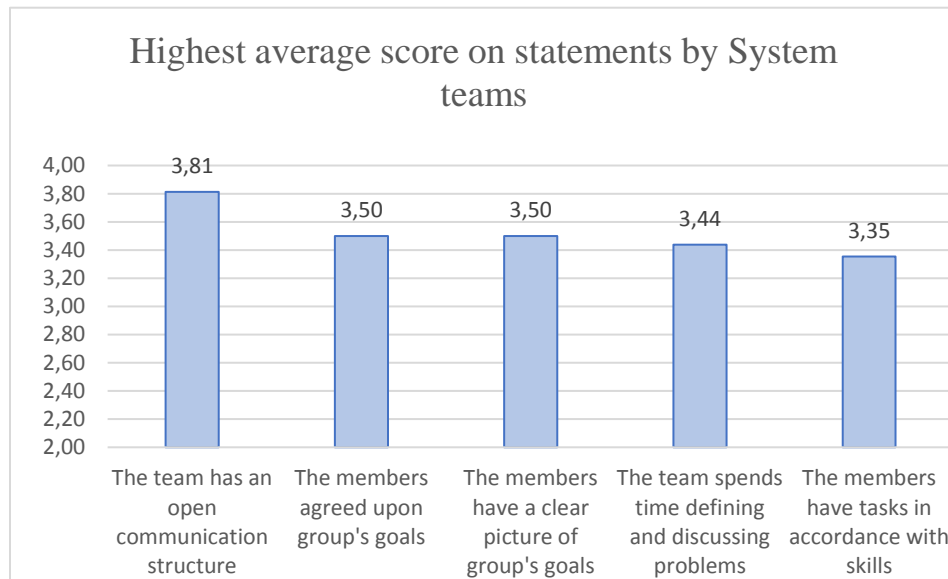


Figure 6 The five statements with the highest average scores from the survey

Further, the system teams had the perception that their teams had an open communication structure since the average of 3.81 shows that most members have scored 4 on this statement. The two statements with the 3.5 average both covers the team's goals, which indicates that the teams have the perception that they work a lot with their goals.

On the other hand, when looking at the five statements that got the lowest rating, presented in figure 7, three out of five statements covered the topic feedback. Hence, the members of the system teams did not experience them having regular and constructive feedback. As well, the other two statements that were scored low by the team members, were the ones that covered that the team spends time on developing their work unit and that they evaluate their solutions and decisions.

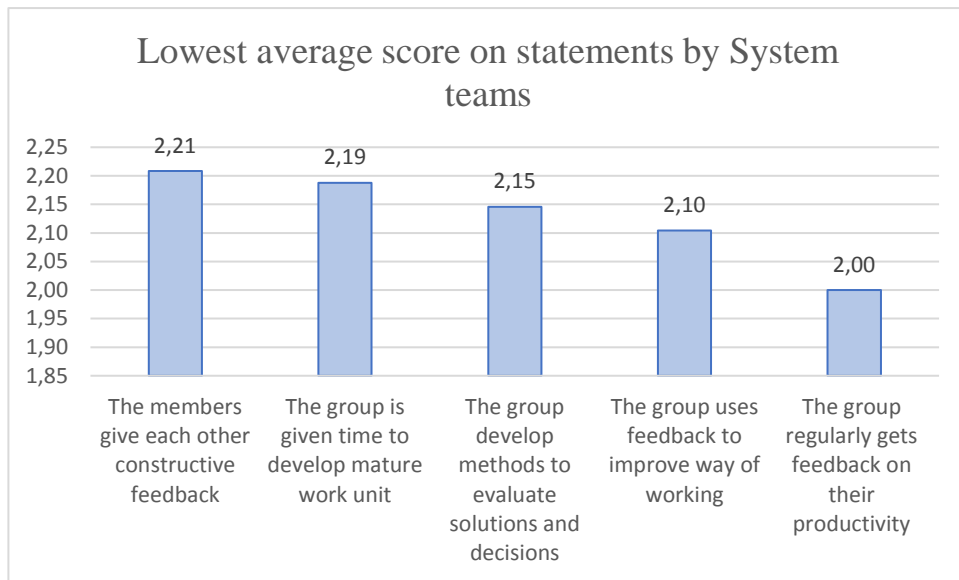


Figure 7 The five statements with the lowest average score from the survey

4.2 Empirical data from well-functioning and efficient teams

To enhance and update the knowledge gathered from investigating previous research and theory regarding high performance teams, six interviews were performed. The interviewees all had high knowledge about high performance teams, either from currently working in a well- functioning team or from having expertise about the topic, according to the thesis's supervisors at Saab. The interviews were constructed in the same manner as the interviews with the employees at the system teams at Saab, but with the exception of some questions that were not found to bring value to these interviews, and with the addition of some questions. The interview templates can be found in Appendix II. It is important to understand that all interviewed teams might not be classified as an actual high performance team, but for different reasons they are seen as teams that are very well- functioning and with a higher performance than many other teams. For these reasons, there was value and interest in interviewing the teams to learn more about them and use this knowledge to extend the knowledge gathered from theory. Interviews were held with six people, and a short description of each of these interviewees will be provided below.

4.2.1 Interviewees from well-functioning and efficient teams

The first interviewee works as a Scrum master for three teams at Saab. The teams are well- functioning according to several project leaders at Saab, and have many of the characteristics describing a high performance team. The interviewee described both his/her thoughts and knowledge about teams as well as describing how the teams are working. The team is using the tool Scrum and the members have been working together for a long time and spend all their time working in the team.

The second interviewee is also a Scrum master working at Saab, working in a relatively large team. The team have several characteristics presented when talking about high performance teams and considered a well- functioning team. The team has been working together for a couple of years and uses Scrum as well.

The next interviewee previously worked at Volvo Cars and at the time worked as a Scrum master for a team that worked very well together. They might not have fulfilled as many characteristics of a high performance teams as the previous mentioned, though still fulfilling several of them, but they were a well- functioning team that had a high level of collaboration and performance. The interviewee answered the question from the aspect of this team even though he/she did not work at the company at the time of the interview. The team had been working together for about a year and used Scrum.

Another one of the interviewees works at the technical consulting company Combitech. He was the Scrum master for a team that in several aspects is considered a high performance team. They had been working together for a few years, used Scrum and all team members spent 100% of their time working in the team.

The fifth interviewee also works at Combitech, but as an organizer for a so-called tribe team. The tribe team consists of about 30 team members, who are organized in different teams as time passes. Hence, they create smaller teams inside the larger tribe team. This way of working was relatively new at the company and might not be called a high performance team at the moment, but the company already saw great benefits from the group and there was value in discussing thoughts about teams and the concept of working in tribe with him/her since he/she had much knowledge about efficient teams.

The final interviewee is a manager at Combitech, with many years experience in working with or creating high performance teams. He/she has been working as a manager for about ten years, has participated in education regarding teams and also has much interest in the psychological aspects of people and teams.

4.2.2 Survey results from well-functioning and efficient teams

Apart from answering the interview questions, the interviewees filled out a survey, except from the manager, who was not part of a team. This was the same survey as the one the system team members filled in. An interesting result from this survey was that two out of the three interviewed well-functioning and efficient teams received the highest score of all interviewed teams, the system teams included, indicating that these teams actually are more high performing than the system teams at Saab. They also received a score above 71, indicating that they are at stage 4 according to Wheelan (2013), which is the state where the team is considered high performing. A more detailed presentation of the results from the survey was provided in chapter 4.1 *Data Collected through survey*.

4.2.3 Compilation of interviews with well-functioning and efficient teams

After all interviews had been conducted, a compilation of the answers was performed in order to create an overview and comparison of the interviews. This was hence part of the base for the analysis of the interviews. To prepare for the analysis, seven categories were created which together include the aspects found important during the interviews. These categories will be presented in table 9. All the empirical data will not be presented here because of its scope, but the aspects found important are presented in chapter 5.3 *Analysis of framework describing High performance teams*, where the framework for a high performing team is analyzed.

Table 9 Presentation of the categories used when compiling the answers from the interviews with the well-functioning and efficient teams

Category	Description
Composition	How the team is composed. How many people the teams consist of, how long they have worked together, what percentage of their time they spend working in the team. Also, regarding if the knowledge of the members overlaps and the diversity of the team.
Practises	What practises the team is working according to. For example, if the team is using Scrum or another tool in their daily operations. Also regards how the team is located, if they sit together when working, how their goals are structured and other aspects regarding their daily work practices.
Communication	How the team communicates. How often they have meetings, who take part in the meetings, what type of meetings they have, what is discussed during meetings what other forms of communication the members use and if they reflect upon performed work etc.
Function	The function of working as a team. Why they are working as a team, not only in the sense of producing their product, but why they produce it in the constellation of a team and not as individuals.
Leadership	The type of leadership in the team. Who are the leaders, if there are clear leader roles, if the team is self-organized or not. In the case of an existing Scrum master, if this person is part of the team or not.
Behaviour	Description of the behaviour in the team. The mind-set of the members and the unity of the team. If they have team building activities and how the group dynamic is in the team.
Other	Other aspects not suitable for the other categories but still of importance, which might not have been mentioned by all interviewees. For example, the amount of feedback, if there are any conflict management, motivation etc.

The usage of these categories when analyzing the interview answers will be further described in analysis in chapter 5. *Part A- Analysis.*

5. Part A - Analysis

In this part of the report, the analysis of the theory and collection of empirical data will be provided. The chapter will combine the information gathered from the different steps in the project and analyze what has been found in order to enable answers for the first research question, regarding the practices and characteristics needed of an organizational team in order to become high performing.

5.1 Creation of a framework describing a High performance team

The creation of a framework describing a high performance team was divided into three different steps. They consisted of compilation and comparison of the theoretical framework followed by compilation and comparison of the interviews from effective and well-functioning teams. The results from these parts were then compiled into one framework. A more detailed description will be provided below.

5.1.1 Compilation and comparison theories in theoretical framework

The theoretical framework in chapter 3. *Theoretical framework* consists of six larger sections; Studies from Wheelan (2013), Hoegl and Gemundsen (2001) and Ammeter and Dukerich (2002), one section regarding Agile, one on Self-Organization and one regarding obstacles hindering the possibility of becoming a high performance team. The reason for choosing more than one study was to generate an understanding of what was regarded important by several authors and hence not being an exception, which is not certainly affecting the level of performance. Agile is often mentioned when talking about efficient teams, and used in some teams at Saab, and was hence part of the theoretical framework.

Important to keep in mind is that the authors come from different backgrounds and have different occupations. Wheelan is a professor in psychology, Hoegl is a head of an institute for leadership and organization and Gemundsen is a professor in project management. Ammeter has a PhD in organizational science and Dukerich has a PhD in organizational behavior. When investigating their researches, it is important to understand that the authors might have focused on different aspects due to their professions. This could be a reason for why their results are not completely similar, rather than some of them missing some of the aspects. However, it could also be seen as a strength for the analysis that the authors of the investigated researches have different backgrounds and professions, since it covers a wider area of expertise.

To compare the different views of what is required to be a high performance team, a table was made to create an overview. To create this table, the aspects described as the most important by each of the authors and in the section regarding Agile and obstacles were highlighted and presented in a clear way. Following this, aspects mentioned at least by two sources was compiled into a category, since they were found important by more than one source. The table is presented in table 6 in the chapter 3.7 *Comparison and compilation of the presented theory* and there it is also presented in short what each of the sources writes about the category. By being mentioned by several authors, the chances of the aspect actually affecting performance was deemed to be higher. This framework served as the base for creating the final framework, which is presented, analyzed and discussed in chapter 5.2 *Framework describing high performance teams*.

5.1.2 Compilation and comparison of well-functioning and efficient teams interviews

The second step of the creation of a framework was to investigate the interviews held with teams who are already well-functioning and efficient, and fulfill several of the aspects describing a high performance team. As described in 4.2.3 *Compilation of interviews with well-functioning and efficient teams*, the answers in the interviews were compiled according to seven categories; Composition, Practices, Communication, Function, Leadership, Behavior and Other. These categories were chosen since they were considered to reflect the content found interesting and important for the topic.

To sort the content from the interviews into the different categories, a table with the categories and the interviewees was created. Each interview was investigated through reading the notes from the interviews and sorting the answers into the suitable category. In case a new category would be found needed this would be added. Following this, the content in the categories was compared between each interviewee to find differences and similarities. It was noticed that many of the things mentioned were similar between the interviewees, which were relatively expected since all teams were well-functioning and efficient and all interviewees seemed to have a high level of knowledge regarding teamwork and how to create well-functioning teams.

5.1.3 Compilation and comparison of theory and interviews to create final framework

When the answers from the interviews had been analyzed, sorted into the different categories and then compared, the comparison between the theory and these interviews was conducted. The first step of this comparison was to review what was part of the theory- table, and investigating if these aspects were also mentioned during the interviews. This was made in order to ensure that the aspects found in theory actually related to what was found about reality. The results were positive. All aspects described in the table of the theory were found in the compilation of the interviews. Hence, a conclusion was drawn that the theory found provided value and could be used as a base for the final framework describing a high performance team.

The next step was to perform the same action but reversed. This time, the compilation of interviews was reviewed and the investigation focused on finding aspects which were not mentioned in the theory-table, but which were mentioned as important to receive a high performance team. Most aspects had been mentioned in theory, but a few were found that differed from the framework.

5.1.4 Changes in the framework after comparing theory and interviews

Four items were changed during the comparison. The names of three categories, Mutual Support, Leadership and Roles, were changed to Mutual Support & Collaboration, Self-organization and Member Contribution. The names were changed since the new names better represented the combination of the theory and interviews than the names that were first provided. This occurred for example when different roles were not specifically mentioned in the interviews, but the essence of the category still was mentioned and discussed in the interviews. Hence, the name Member Contribution seemed more applicable for both theory and interviews. Furthermore, one category was added since the content was missing from when investigating theory, but found important from the interviews, as well as found important by the authors of the thesis. This category was Motivation. The framework will be presented together with explanations of the different categories, to provide a deeper understanding of the analysis and discussion regarding each category.

5.2 Framework describing High performance teams

After conducting the steps described in the previous sections, the final framework was created. This framework contains the categories that the authors of this thesis have found as the most important in order to become and remain a high performance team. The framework is presented in table 10 below.

Table 10 The framework describing high performance teams

Category	Description
Goals	The team should have clear goals that should be communicated to all members. There should be regular discussions and updating of the goals to assure all members have the same comprehension of the goals and to avoid confusion. The goals should be challenging, concrete and current.
Member Contribution	Each member should bring the right skills and knowledge to the team to complete the designated task and it should be clear what competence and experience is expected from each member. Having some overlap between members regarding competence is positive since it fosters collaboration. The team should consist of the least amount of members that is required to perform the task. As well, the team members need to have a positive attitude towards teamwork and be open for change.
Mutual Support & Collaboration	The team should have a cooperative mind-set and collective thinking, meaning they support and help each other in performing their tasks, and consider the team as "we" rather than individuals. Their competences overlap to enable collaboration and discussion and increase the amount of viewpoints, which leads to more adequate decisions. The team should be collocated.
Self-organization	The team should be self-organized, which indicates that they make their own decisions and plan their own work. Management will give the team a task, but the team will decide for themselves how to operate it. The team should have a leader who is there to coach, consult and facilitate the members' daily jobs. Both the leader and the team should be transparent in their work, to increase everyone's knowledge of the current situation.
Communication	The communication should be open, frequent and direct, and be held face-to-face. Frequent meetings are of high importance to increase communication, but informal communication is also important, and increases when the team is collocated. All members should participate in the communication and everyone should be heard. The team should have reflections on performed work and discuss failures and how to improve their performance.
Planning & Coordination	It is of importance that the team sit down together and discuss and plan an approach that they will use to solve problems and make decisions. Thereby, creating a mutual understanding among the team members of their work structure. The discussions should cover how to structure tasks, budgets, schedules and deliverables. However, they should not apply too many rules and policies since it hinder motivation.
Sense of Belonging	Sense of belonging to the team is one of the most important aspects to create an efficient team. The team should have a strong unity and have good relations between the members. To increase the team spirit the members should be part of

	team building activities, and it is positive if they also spend time together outside of formal meetings or events. The team members should be dedicated to one team and spend 100% of their time working with the team's tasks. To develop as a team and feel comfortable in the team it is required that they work together for a longer period of time, preferably a year. Having good unity increase the social support and safety, which favour motivation and happiness. Celebrating success is also a way to enhance motivation and performance, as well as feeling personal success when performing well, since it increases the sense of belonging to the task.
Evaluation & Feedback	The team should evaluate their work, discussing what they did well and what they can improve. They should reflect upon what they can do better and then change their behaviour accordingly. The team members should receive and give regular feedback to/from the leader and the other team members. Having regular feedback will contribute to continuous improvements as well as developing the individuals and help them to reach their goals.
Motivation	Being motivated is of great importance for individuals to increase their performance. Having motivated individuals as well as fulfilling the previous mentioned categories in this framework is important for the team's performance. It is important to understand that individuals are motivated by different things, and also to understand when these change and discuss it with the members in order to sustain the motivation once it is found.

5.3 Analysis of framework describing High performance teams

As mentioned, the aspects found most important in theory and from the interviews with the well-functioning and efficient teams were compiled into a framework describing the characteristics and practices of a high performance team. Below is an analysis and discussion of each category.

5.3.1 Goals

One of the categories which was found most important in both theory and interviews was Goals. All the authors studied for the framework mention having performance goals as an important aspect in order for a team to become more efficient. Wheelan (2013) was the author with the most focus on goals and also mentions that problems can occur in case the goals are not clear. As Wheelan discusses teams from a behavioral point of view, and does not focus on a specific type of team, the importance of goals could vary depending on what team is considered. It could also be a matter of behavior since having clear goals might provide the member with an easier understanding of what to perform, reducing anxiety and hence supporting the member and team to become more efficient. Furthermore, Castka et al. (2001), mention that having goals is important to avoid confusion, which could also be connected to the reduced anxiety. However, other authors also describe goals as important and how they should be formulated. Clark (2003) discusses motivation and mention that goals should be challenging, concrete and current. This imply that having specific goals also is a matter of motivating the members. Why motivation is seen as important is described in the section regarding motivation later in this chapter. Having challenging goals is also mentioned by Larman and Vodde (2009) when talking about self-organization, which can be seen as further implying that having goals which are challenging is important as well, and not only to have clear and specific goals. The authors of this thesis believe that it might be due to the possibility for the employees to develop in the

workplace when having challenging goals. Moreover, clear goals increase the feeling of safety and at the same time creates an environment where the employee can develop and receive new knowledge.

When the interviews were held, the answers showed that having performance goals is not only a matter in theory. All the teams have clear goals and they assure that all members are aware of the goals. Clark (2003) says that the lack of clear goals could create less commitment to the job, which might be one of the reason for why the interviewees found goals as important. One example was one interviewee who said that every time a new member entered the team, the entire team sat together and discussed the existing goals and created new ones, in order for the goals to be clearly understood by all members and feel current for the situation. This imply that having goals is important in reality as well as in theory, and makes the perception from the authors of this thesis, that performance goals are of great importance, seem correct.

5.3.2 Member Contribution

The second category in the framework is Member Contribution. This category was changed after the interviews were considered. When only considering the theory, this category was called Roles. The importance of having clear roles was mentioned by some of the authors, but when interviewing the well-functioning teams, the term roles were not found as important. However, the essence of what theory considered when discussing roles was also mentioned by the interviewees, but it was not used with the same term. Moreover, other aspects connected to the content which was described in the theory-table regarding Roles were also mentioned by the interviewees. Hence, the content regarding roles still was found interesting for the framework, but a more suitable name of the category was Member Contribution.

The category covers what types of skills and knowledge exist in the team, and is mentioned several times in theory. Hoegl and Gemundsen (2001) discusses the importance of members bringing the right knowledge to the team, similar to Wheelan's (2013) discussion about that all members should have the right skills for their roles. These aspects hence seem to be important from two points of views. One is that the right knowledge is actually provided to the team, ensuring that the contribution required is indeed provided. The other seems to be more regarding that the right skill is provided to the right role. As this is Wheelan's view, and she focuses more on the behavior in her research, it might be considering to be more regarding that the member feels secure in his/her role, and feel that he/she can contribute with what is expected from him/her. Furthermore, having the right skills for the job and for the role will ensure that the team is able to perform what is expected from them, and become efficient in their work.

The aspect regarding the members having the right skills is presented by Bauer and Erdogan (2012) in a performance equation where one of the factors in the equation is ability. Ability is in this case corresponding to the members having the right skills, and hence this is an aspect found important by several authors. When talking to the interviewees, having the right knowledge was mentioned several times, but not in the terms of roles. To have specific roles did not appear to be as important as in theory, but having the right knowledge was still considered as a part of becoming a high performance team. One interviewee also mentioned that the focus should not be on having cross-functional teams, but on having the required width of knowledge. One reason why roles are not discussed as much by the interviewees as in theory could be since having specific roles could feel as an unnecessary addition of titles on the members, and extra effort to find out who suits which role. By still focusing on having the right skills and knowledge in the team, the important parts of roles could still exist and contribute to the team's efficiency, without assigning roles to each member.

Other important aspects in this category is the one mentioned by Wheelan (2013): to have the least amount of members required to be able to complete the tasks. It is likely to believe that too many members could create a feeling of it not being necessary to work as efficient as possible since there are other people who can do part of other member's tasks, meaning that the team will not be as efficiently as possible. Also, this could create a situation where the members work on tasks which are not needed currently, when their time could instead be aimed at more, for the moment, important tasks. The team would hence not be efficient in time or money. Having too few members would create a stressful workplace which is not healthy, and would not create an efficient team since the members might not be able to finish all tasks on time. Hence, the team should consist of the least amount of members required to complete the tasks on time. Moreover, Castka et al. (2001) mention that the members need to be positive towards working in teams and willing to change. This is also part of the member contribution since it is about the mindset of the members. It could be considered that having the correct amount of team members, as Wheelan (2013) mentions, could make members more positive towards teamwork, if they for example feel the possibility of performing their tasks one time and without unnecessary stress. Hence, one step towards becoming a high performance team is to keep all aspects mentioned in this chapter in mind, and thereby have a more balanced level of member contribution.

5.3.3 Mutual Support and Collaboration

The next category is Mutual Support and Collaboration. This category was, after compiling the theory, only called Mutual Support. However, after conducting the interviews, there was found that much focus was put on collaboration as well, not only support, but since these aspects connected they were both added into one category. Mutual support imply the members help each other when needed, while collaboration is more about collaborating when conducting tasks in the team.

One important aspect to reach both support and collaboration is to have a cooperative mindset. That cooperative mindset is one of the aspects to consider when discussing high performance teams is mentioned by Hoegl and Gemundsen (2001). The authors of this thesis also find this as an important aspect, since a member with a cooperative mindset will more likely be willing to use some of their time to help other members and understand that collaboration could lead to greater outcomes than the sum of several people working individually. The collective mindset was also mentioned during the interviews, further implying that this is of importance to become high performing. Also, as discussed in the interviews, having a competence overlap enables the members to help each other. The authors of the thesis believe that the effect could be that the members could meet at their common knowledge area and from this help each other with assignments, or from there provide knowledge about new areas to each other.

By ensuring there is Mutual Support and Collaboration in the team, there is also, according to the authors of the thesis, a greater chance of creating the "We"- or "Us"-feeling in the team, instead of each member only seeing the team as different individuals. The importance of creating this feeling was mentioned during the interviews, and could be a way of creating a stronger feeling of safety and support as well as the willingness to perform at the highest level, not to disappoint the other members in the team. Another aspect of having collaboration is that the opposite could lead to less adequate decisions (Wheelan, 2013). It is likely to believe that this could be since several people provides more viewpoints than if decided by individuals. Furthermore, having a collaborative mindset and a "We"-feeling might increase the willingness or courage to contribute to the decision making, further providing more adequate decisions. Also, Clark (2003)

mentions, when talking about motivation, that collaboration is essential for team success, further strengthening the understanding of the authors of this thesis that this aspect is important.

The final aspect of this category which was stressed by both theory (Ammeter & Dukerich, 2002) and interviews were that the team needs to be collocated, and hence sit together when working. Many interviewees talked about the importance of this aspect. When being collocated, members will receive positive overhearing, meaning conversations between people sitting next to the member, which on one hand might be disturbing the focus, but which also are relevant to the member and hence is positive. The positive side of this outweighs the negative aspect of being disturbed, since for example many questions could be answered in an early stage and misunderstandings could be found before they cause problems. It also makes it easier to discuss questions and thoughts without the need of booking an appointment or writing an email. Considering all aspects in this chapter, Mutual Support and Collaboration is important in order to become a high performance team.

5.3.4 Self-organization

The next category in the framework is Self-organization. As the two previous categories, this name was changed after compiling the theory with the interviews. At the start, it was called Leadership. But when considering that most theory pointed at self-organizing teams without directive leaders for high performance teams, and that this opinion was also reflected by the answers from the interviews, the title Self-organization seemed more appropriate. One reason to why this have appeared in the interviews could be that all interviewees worked with Scrum in their teams. As explained in the theoretical framework in chapter 3.4.3 *Scrum*, using Scrum implies not having directive leaders, but instead leaders who support, coach and facilitate the work of the employees. This could be interpreted in two ways. One is that it could be considered not appropriate to only interview team members working with Scrum, since this would not provide a fair picture of what leadership well-functioning teams use. The other interpretation is that, since all teams used Scrum, this type of leadership is the one found most efficient for the well-functioning teams. Another aspect strengthening the second interpretation is that the fact that all interviewed teams used Scrum was not known by the authors of this thesis at the time of arranging the appointments with the interviewees. For some of the teams this fact was known beforehand, while for other the authors' only knowledge about the team was that they were high performing. Hence, it is reasonable to believe that having a non-directive leader, and hence a more self-organizing and managing team, is preferred by the well-functioning and efficient teams.

As mentioned when talking about Scrum, the leader should have more of a supporting role (Sutherland, 2010). This is also mentioned by Wheelan (2013). Wheelan writes that the leadership should change when the group matures, from more directive to a leadership enabling self-organization, where the leader has a more coaching and consultative role. This is further strengthened by Larman and Vodde (2009), who mentioned that leadership should change from directing and deciding to creating an environment where self-organization is possible. It is also described by Ammeter and Dukerich (2002), saying their research showed that leaders most important role is to communicate goals and values, present objectives and ensure that the team communicates. All of these can be considered as a way of supporting and facilitating the work of the team. For the leader to act more as a coach, consultive and support was also mentioned during the interviews, and hence seems to be important in actual well-functioning teams as well as in theory. This could most probably be important for several reasons, one being the facilitation of having someone who ensures that the team can work with as few obstacles as possible. Another reason could be the members' feeling of being

trusted and the opportunity to control their own work. This is, according to the authors of the thesis, of great importance in order to keep the employees motivated. This is also strengthened many times by theory regarding motivation, for example Pink (2009) who points out that autonomy is needed to become motivated. Furthermore, Dobre (2013) mentions that individuals get empowered when they are provided with authority and freedom to make decisions as well as having control of their work.

Even though it is important to have self-organized teams, it might not always be easy to reach that stage. Hoda (2011) says that to become a self-organized team, the team needs to be cross-functional. This indicates that the members have individual specializations, which was also mentioned in the category “Member Contribution”. This shows that the different characteristics of a high performance team enhance each other, further increasing the possibility of becoming high performing as a team. Another aspect mentioned in the framework is that the leader and the team should be transparent in their work. This is mentioned when talking about Scrum (Sutherland, 2010), and could likely be important to ensure everyone feel they know what the other members and the leaders are working with, to create a feeling of trust. With Scrum being a tool in Agile, self-organization is a frequently used term in Agile as well.

One final note on this category is that Moe and Dingsoyr (2008) mentions that self-organization can increase teams’ effectiveness since the decision making is moved to the operational level and hence the speed of problem solving can increase. This, together with the other aspects mentioned, shows the importance of having this type of leadership. That it is strengthened by both interviews and theory further implies that it is an important characteristic of high performance teams.

5.3.5 Communication

Another of the categories in the framework is Communication. When investigating the theory, it was found that all of the authors state that communication is of great importance and that there should be a lot of communication. As mentioned in the framework, the communication should be frequent, direct, informal and open, which is stated by Hoegl and Gemundsen (2001). That the communication should be open is also mentioned by Wheelan (2013), and to have face-to-face communication is discussed by Beck et al (2001) when talking about Agile. All of these aspects are relatively similar, and emphasize the importance of how to communicate. The authors of this thesis also strongly believe in the importance of communication to become a high performance team. Having open communication will allow the members to talk to who they need and want, without restrictions. Also, it will create a feeling of safety which will encourage them to actually discuss matters with any member or the leader, even though it could be a difficult task or subject. Face-to-face communication will decrease the risk of misunderstandings, which are most probably larger in case of information being sent by email, or even by phone. Having frequent information also enables the members to discuss smaller matters which might be of great importance at the end, but which might be missed if only communicating on few occasions and at those times only discussing larger tasks or problems.

Having frequent communication could also lead to a better unity in the group, mentioned as important in the category Sense of Belonging in this framework. Hoegl and Gemundsen (2001) also points out the importance that everyone should participate and be heard, which the authors of this thesis found important as well, in order to create a better environment in the team. Having frequent meetings are mentioned as important by Ammeter and Dukerich (2002), and the importance is further strengthened by the fact that all the interviewees in the well-functioning teams have frequent meetings in their work routine. This might be

due to the teams using Scrum, since Scrum according to Sutherland (2010) ensure frequent meetings and communication, partly due to the daily Scrum meeting, and communication about performance. Another aspect used in Scrum is retrospective, meaning that the members discuss performed work, what went good and what could be improved. This was used by the interviewees, who thereby reflected over their work. This was mentioned as an important part of communication by the interviewees, and also found important by the authors of this thesis. This is because reflecting about work will enable the team to find mistakes which could be corrected as well as positive aspects which should be enhanced. Thereby, the team has a greater possibility of becoming more efficient. In the framework the word reflections is used instead of retrospective, due to retrospective being a term in Scrum, and the framework is a support for teams even if they are not using the Scrum tool. Another important point made by the interviewees was that they discussed failures if such occurred instead of ignoring that they had happened. It is most probably important to use these as an opportunity to learn and improve, instead of only being negative that they have occurred, and hence this is part of the framework.

Another important aspect mentioned in the framework is that there should be informal communication. This is communication which is held outside of meetings, and could be considered as important since it enables questions to be answered quickly instead of members waiting for a meeting. Informal discussions can, according to the authors of the thesis, also be about other topics than work. However, indirect through these conversations potential solutions or improvements for work related topics could occur. Moreover, could as well create a stronger feeling of unity if conversation occurs outside of meetings, which is mentioned as important in Sense of Belonging in this framework. In the interviews with well-functioning teams, the members mentioned that collocation increases the amount of informal communication, further emphasizing the need for collocation mentioned in Mutual Support and Collaboration. Through considering all of the above mentioned aspects, the content for the category of communication was created, which is found important to become a high performance team.

5.3.6 Planning and Coordination

The following category in the framework is called Planning and Coordination. This category was not mentioned by all of the studied theory, but was still found important by the authors of this thesis, both due to being mentioned in some theory, and due to it fostering some of the other categories. For example, by planning the work together, the team enhance the amount of communication, shown to be important in the category Communication. Also, by focusing on how to plan and coordinate, clearer performance goals could be provided, found important in the category Goals in this framework.

In the framework it is also presented that it is important that the team sit together, discussing and planning how to solve problems and make decisions. This is stated by Wheelan (2013), who also mentions that this creates a mutual understanding in the team on how to approach a problem and how to solve it. Wheelan (2013) sees this as important in order to become a high performance team. Other discussions to be held in order to increase the performance of the team are, according to Hoegl and Gemundsen (2001), regarding budgets, tasks, schedules and deliverables. The authors of this thesis find these aspects important to discuss since it creates a feeling for all members as being a part of the development and decisions in the team, and also enabling them to take part in making decisions regarding their work. To know how these prospects have been decided can further increase the trust between members and leaders. Planning together was emphasized by the interviewees, and something they do in their work routine. This further strengthen the

perception that this is of importance to become a high performance team. Moreover, the interviewed teams in many cases use sprints when planning their work, as described in chapter 3.4.3 *Scrum*. The teams discuss how to structure their tasks and schedule and whether who will perform each task in the sprint should be chosen by the member himself/herself, or if the task should be assigned to the member. It is likely to believe that having these discussions will improve the work environment and the enthusiasm by the members for the tasks.

Finally, it is important that there are not too many rules or work barriers which are not necessary, and that this instead is as simplified as possible, since it might otherwise hinder the motivation according to Clark (2003). As motivation is one of the categories in the framework, it is of importance that this is not decreased only to structure rules of how to plan and coordinate. But by having the team come up with the rules together, the authors of this thesis believe this risk will decrease, and the positive aspects of planning and coordinating will help the team to become a high performance team.

5.3.7 Sense of belonging

This category in the framework, Sense of Belonging, was mentioned as important several times in the studied theory, as well as being emphasized by the interviewees from the well-functioning teams. To have a sense of belonging to the team as well as a strong unity in the team was mentioned by all authors, and the research performed by Ammeter and Dukerich (2002) resulted in sense of belonging being the most important aspect in order for a team to be high performing.

One part of the framework presents team building as an important way to create the sense of belonging. This was mentioned in both theory and interviews and hence seen as an important part of the framework. Having team building activities and increasing the team spirit is important according to Ammeter and Dukerich (2002), and the importance of team spirit is also mentioned by Hoegl and Gemundsen (2001). Most of the interviewees said their team had some sort of team building activity, kick off activity, went for coffee together etcetera. The perception during the interviews was that they all had a great amount of team spirit and a good environment in the team, and when asked, all interviewees expressed their unity in the team as good. Wheelan (2013) also mentions this when talking about the importance of the team spending time together both inside and outside of meetings, which most probably could be considering team building activities. The authors of this thesis believe that the team building activities or other situations where the team has the opportunity to get to know each other is important, and that it increases the team spirit. They also believe that this is of importance for becoming a high performance team, since having unity in the team creates a willingness to perform at the top level and help the other members. Moreover, there will be a feeling that the entire team will gain from supporting each other, and there is a desire to act in favor of the team.

Another part of this category is the importance of how the team members spend their time. First, Wheelan (2013) says that the team should work together for a longer period of time in order for them to become high performing. Partly this is because they need the time in order to go through the different stages required before becoming high performing. Most of the interviewees said their teams had been working together for a long time, implying, even if not proving, this could be important in order to become efficient as a team. The authors of this thesis support the thought of this being important, since it could require time in order for the members to trust and get to know each other, helping the sense of belonging and increasing the

possibility to become high performing. Apart from being in the team for a longer time, it is also important, according to Cottmeyer (2015) when talking about Agile, that the members spend their time only in one team, and not working in several teams at the same time. This is also mentioned as important by one of the interviewees. As for the interviewees, almost all members spend 100 % of their time in one team, further implying that this is a factor which increases the possibility to become more efficient and well-functioning as a team. The authors of the thesis also believe this could be important in order for the member to easily know what to prioritize. If participating in several teams, it could become difficult to know what tasks are most urgent and should be prioritized, creating an uncomfortable situation for the member. Being a member of only one team hence facilitates to keep the focus and become more efficient. The authors of the thesis also believe that it is beneficial if the members, if possible, spend all their work time on tasks belonging to the team, since this also removes the need of prioritizing between different stakeholders, and aiming all focus at the team.

Furthermore, having a sense of belonging to the team also is important to feel social support and safety. This was mentioned several times as a very important factor in order to become an efficient team by one of the interviewees, and is also mentioned by Geller (2013) when talking about motivation. Geller (2013) states that it is the people surrounding a person that creates a sense of connection and due to this, and the social support it creates, increase motivation as well as social happiness. The authors of this thesis also believe this is of great importance. Having the social support and feeling safe in the team encourage members to discuss problems, thoughts and ideas, and reduce stress which could occur if not feeling safe in the team. It is likely to believe that the reduced stress about this factor could improve the efficiency of the member as well as the entire team. In the interview it was also mentioned that the teams had a feeling of “we” and “us” in the team, which also was mentioned as important in the category Mutual Support and Collaboration. It is likely to believe that this feeling increases when there is a strong sense of belonging in the team, as well as a feeling of safety and social support.

Finally, it is also mentioned in the framework that there is an importance of celebrating success, and feeling personal success when performing well at work. To celebrate success was mentioned in the interviews and performed by these teams. This is much likely a way of strengthening the unity in the team, and encouraging the members to perform well. To feel personal success was mentioned by Ammeter and Dukerich (2002) as important to become more efficient. The authors of the thesis believe this is enhancing the willingness to perform at a high level and reaching better results, since there is a feeling of not only performing for work, but also for the member’s own feeling of personal success. All the factors mentioned in this chapter are important in order to create a sense belonging to the team, which has shown to be important in order for the team to become high performance, and hence it is an important part of the framework.

5.3.8 Evaluation and feedback

Another category which was found important by theory and interviews, and hence becoming part of the framework, was Evaluation and Feedback. Having evaluation of the work performed is an important part when working with Scrum, and according to Sutherland (2010), using the tool ensures that the team talks about the performed work. In Scrum, the team should hence discuss what went well and what did not, and discuss how changes can be made accordingly. This is done during the retrospective which is held after each sprint, where the members take time to talk about the past sprint, also mentioned in the category Communication. With Scrum being a part of Agile software development, Agile as well discusses the

importance of reflecting on how the team can be more effective and change according to those discussions (Beck et al, 2001). Wheelan (2013) also mentions that there should be discussions on performed work. In the interviews it was also found that the teams were using retrospectives in order to discuss how they can improve, which is most probably since they are working with Scrum, but they seemed to find the tool efficient and useful. Given the theory and answers from the interviewees, the authors of this thesis find evaluation as an important aspect in order to reach a higher efficiency and performance level. If not evaluating the performed work, there ought to be more difficult to become a high performance team, due to not finding what works less well in the team and change those factors, as well as finding what is working better and enhancing those factors. By reflecting and evaluating about this, the team should have an increased chance of becoming a high performance team faster, and remaining in that state, than if not using these tools in their work routine.

The other factor in this category, Feedback, was also found important in both theory and interviews. Beck et al (2001) mention the importance of feedback, and Wheelan (2013) states that having feedback is important, and that it develops the team members and help them reach their goals. Similar to that statement, Clark (2003) talks about the importance of feedback for motivation, and states that it is necessary to have regular feedback in order to ensure the employees will be able grow professionally. Castka et al. (2001) further say that insufficient feedback is an obstacle towards becoming high performing as a team. During the interviews, it was found that the interviewees generally did not use feedback commonly in their work, but they agreed on the importance of having it and wished to use it more. The authors of this thesis find feedback important and believe it should have a place in a team's routines for how they work. If not having feedback, the member might not be aware of potential mistakes being made, or inefficient ways he or she is working. Due to this, inefficiency might remain for an unnecessary period of time, which could have been shortened if found and communicated early. Furthermore, if not having feedback the team member might also not be appreciated for when he or she is performing well, which could lead to the member not continuing to perform the tasks in this way or not developing this performance to become even better. The authors of this thesis also believe that it is very important for the motivation of a team member to be appreciated for his/her work, as well as receiving constructive feedback, since this enables members to develop their skills and becoming better at their work, further increasing the motivation. Hence, with both evaluation and feedback found important in theory and interviewees, as well as by the authors of this thesis, the category is of importance in order to become a high performance team.

5.3.9 Motivation

The final category in this framework was added after having conducted the interviews with the well-functioning and efficient teams. When only compiling the theory that had been investigated, motivation was not mentioned as one of the factors increasing the performance of a team. Therefore, the theory-table consisting of combination of the researched theory did not include motivation. However, motivation was discussed during the interviews and found important by several of the interviewees. Adding to this, the authors of this thesis strongly believe motivation to be one of the most important factors in order for a team to become high performing. because for this, Motivation was added to the theory-table when compiling it into the final result.

Even though motivation was not specifically mentioned by the authors studied, several of the factors important to create motivation are emphasized even in these researches. When the authors of this thesis

noticed that motivation was not specifically part of the theory studied but still found it important, new theory regarding the topic was investigated. While studying that literature, it was noticed that many of the aspects needed in order to create motivation was already mentioned by the other categories in the framework. This way, a further conclusion was made that the factors leading to motivation seem to be considered important, and that the result of motivated members, could be part of the reason to why a team becomes high performing. To the authors of the thesis it also felt reasonable that if a person is in need of being motivated to perform efficiently and well, the same most probably apply for a team, since the team consists of people. Furthermore, as mentioned in the section regarding Member Contribution and in chapter 3.8 *Employee motivation*, Bauer and Erdogan (2012) described an equation saying that performance is a function of motivation, ability and environment. Hence, having motivation is stated as necessary to increase performance. This might however regard single team members, but as mentioned, the authors of this thesis believe there is a need for motivated team members in order to create a high performance team. It is however important to acknowledge that people are motivated by different factors. For some it might be the people at the office while for others it might be to work with challenging tasks. Dobre (2013) states that this can cause a challenge for management, since different members need different aspects fulfilled in order to be motivated. The authors of this thesis believe this is important to know when working in management. It could be easy to believe that all people are motivated by the same factors, and by only fulfilling these, the motivation of some members might decrease, leading to a lower performance. It is also important to understand that individuals' perception of what is motivating them might change over time. To have a continuous conversation about motivation with the employees hence is important, and it is likely to believe that this also will create a feeling of being valued and listened to for the members, much likely increasing the motivation further. As an example of what creates motivation, Pink (2009) states that some aspects increasing motivation the most are autonomy, mastery and purpose, as mentioned in 3.8 *Employee motivation*, and nowadays it is not rewards or financial incentives, as it might have been considered earlier.

Finally, having motivation seems to be very important for an employee to perform at their best, and hence ought to be important in order for the team to become a high performance team. Therefore, motivation was added to the framework, and seen by the authors of this thesis as one of the most important categories to fulfill in order to become a high performance team.

6. Part B - Empirical data

Part B of this master thesis covers the data that was collected to be able to answer research question two. For this thesis, four system teams from the division System Design Mission System at Saab Airborne have been studied. The studied teams are called LinkE, MTS, R&R and PDS. The reason why these teams were chosen is described in chapter 2.3 *Research Process*. All teams consist of people from the following subsystems; Mission System, I&V, C2 and Platform, with the exception of LinkE that does not include anyone from Platform. A brief and simplified description of the teams and subunits will be provided below, to deepen the understanding of the background to the gathered empirical data.

6.1 Description of subsystems and system teams

Saab Airborne is divided into several subunits. A very simplified explanation will be provided, since the organization is complex and difficult to understand and describe. The aim with this explanation is to provide a general understanding for the reader to simplify the reading of the report. The focus of the thesis has been aimed at teams working as part of a base program which will lay a foundation for how to handle future projects. This program consists of both subsystems and system teams. The subsystems can be explained as being the area of expertise an employee possesses. Each employee belongs to one subsystem. To produce the product, several different areas are needed. For each of these areas, a system team is responsible. An employee belongs to one or several system teams. Hence, in each system teams there are members from different subsystems.

Mission System, MS, is a subsystem that handles the requirements from both customers and product management. Furthermore, they handle studies and analyses applicable for the entire system, such as Human Factors, external interfaces and Information Assurance. I&V is a subsystem which performs integration and verification of the produced products which will be delivered, both hardware and software. For example, Platform and C2 are delivering products to I&V for verification. The third subsystem, C2, are located in Luleå, Sweden, and is a subsystem that consists of constructors programming software. They have responsibility for all application software they produce, and deliver their products to I&V for integration and verification. While being part of the system teams, in C2 there are also constructor teams focusing on different aspects of the product. The final subsystem, Platform, has its focus on hardware, but also produces a smaller amount of software.

As for the system teams, they consist of different amounts of members ranging between 4 and 8 depending on what team. PDS is an abbreviation of Planning and Debriefing System. This system let the user plan the flight they are about to make and also debrief it afterwards to see if everything occurred as planned or if something should have been performed differently. R&R is short for Record and Replay, and is a function used in the PDS and MTS. This is the function of recording everything that happens during the flight and then replay it in order to debrief it. MTS is an abbreviation of Mission Training System and is a system where the operators can practice how to use the hardware and software that will be part of the final product. LinkE handles the link of sending information between the plane and the ground.

6.2 Presentation of the empirical data regarding the system teams according to the framework describing High performance teams

This chapter presents the four system teams within System Design Mission System at Saab Airborne on which this research has been focused and in which fifteen interviews have been conducted. It is of importance to mediate that each member in the teams have not been interviewed, but in each team one member of each subsystem is represented and together 15 team members were interviewed. The authors of this thesis have chosen not to present the teams with their name, in respect for the members and their privacy. Moreover, the answers will not be connected to the individual interviewees in order for them to remain anonymous. The teams will be referred as Team A, Team B, Team C and Team D. The data is presented according to the compiled framework regarding high performance teams presented in chapter 5.2 *Framework describing High performance teams*. The data is divided into each category of the framework with clarifying subtitles which are compiled from the interview questions. The four teams are separated to provide a clearer view of the teams' compositions and practices and as well an opportunity to compare each team.

6.2.1 Goals

Goals is the first category in the framework for high performance teams, and have been divided into two categories, the team members' perceptions of their goals and if they have composed any goals by themselves within the team. This section was conducted from asking each team member what their team's goals were, to get a deeper understanding if they have a common perception of their goals.

6.2.1.1 Team A

Perception of goals

When asked about what goals this team had, all members did not reply with the same answer. Overall the answers were that they were to create a product that fulfilled all customer requirements, but some members gave the answer as from their subsystem's goals and not the team's. Moreover, the goals were not elaborated by the team themselves, but handed to them.

Own goals within team

The team does not set any own goals for themselves to strive for, instead they work by the plans set for each increment by the sub-project leaders. They describe themselves as strictly controlled by the sub-project leaders from their subsystems.

6.2.1.2 Team B

Perception of goals

All members within this team gave different answers to the questions regarding what the team's goals were and in general they answered from what their own tasks were, rather than the goal for them as a team. One member saw their goal to be to make sure that their created product worked whereas one saw their goal as dividing and specifying the customers' requirements. Regarding what their function as a team is, the members did not have a clear answer other than that the management had requested them to be a team.

Own goals within team

All members agree up on not setting any own goals for the team, instead they have broken down the customers requirement into sub-goals. But they do not have any goals of what to achieve within the team. The members of team B does not have any clear picture of what is required of them and people around them to reach their goal.

6.2.1.3 Team C

Perception of goals

In this team all members had similar answers; that their goal is to create a product that is accepted by the customers and fulfill their requirements. One answer was as well directed more towards the goal with them as a team, to have a convenient and efficient way of communicating between subsystems.

Own goals within team

Team C does not set any goals of their own, they work to reach the general set goals for the inkrement. One member mentions that he/she is given sub-goals by his/her sub-project leader for him/her to strive for, which does not have anything to do with the system team.

6.2.1.4 Team D

Perception of goals

All members within this team had the same perception regarding their goal; that they in the end of the project have a working service to deliver to the customer. The function of them being a team was perceived as an easy way to communicate between the different subsystems.

Own goals within team

As the other teams, Team D does not set any goals of their own. They sit together and break down the goals that are provided to them. However, the members reckon that deep knowledge and experience is needed in order to reach their provided goals.

6.2.2 Member contribution

This section covers the perception of the members own knowledge and the other team members' knowledge and whether their knowledge overlap. Also, it contains the existence of roles in the team.

6.2.2.1 Team A

Knowledge division

Each member of Team A considers themselves to have a broad knowledge whereas they think of the rest of the members to have a deeper knowledge within a specific area. Still, the members see an overlap of their knowledge so that they can have discussions regarding their different work areas. However, this does not indicate that they do collaborate, just that there is a possibility of collaboration.

Roles

Each member in the team seems to have a clear picture of what their function in the team is and with what they are supposed to contribute. Some members as well see themselves as having specific roles in the team, such as the organizer who makes sure that they have meetings each week.

6.2.2.2 Team B

Knowledge division

As in team A most of the members in team B consider themselves to have a broader knowledge whilst the rest of the members have a deeper knowledge. Though, the members point out that their knowledge really depends on the task and they believe that they all have good enough knowledge on each other's areas so that they can help each other and discuss different problems together.

Roles

Team B does not have a clear division of roles in their team. Several members presented themselves as the one with the general knowledge of the product and the one holding the group together. Though, everyone knows what they are supposed to do in the team and what they are contributing with.

6.2.2.3 Team C

Knowledge division

The members of team C all have the same perception of their knowledge; that they are T-shaped. This indicates that they have deep knowledge within their own areas whereas they have a broader understanding of the whole system. They see a purpose of having a knowledge overlap between the team members, but they do not use it for sharing their knowledge and discussing their work. Though, the members see the implication their discussions could have if they were used when creating and not only when evaluating their work.

Roles

Several members have the perception that they contribute with experience to the team. They know what their assignments are and what their role is regarding to that aspect, but there is no real perception of what their roles in the team are. Several members see themselves as the front figure for the system team in their subsystem.

6.2.2.4 Team D

Knowledge division

In team D the members see themselves as having broad knowledge and that the rest of the members have a spread of deep and broad knowledge. They have the perception that they complement each other and that they talk to each other when in need of advice. Lately they have had more knowledge sharing and knowledge spreading and therefor feel like they are using that their knowledge overlap.

Roles

As with Team C, the members' assignments within the team are clearly divided whereas their roles in the team are not as specified. They all see themselves as contributing with knowledge and experience.

6.2.3 Mutual Support and Collaboration

This category covers in what extent the members work together and whether they are dependent on each other.

6.2.3.1 Team A

Location and collaboration

Generally, all members do their own assignments and only discuss with the team what they have performed. The members from I&V and MS support each other a bit in their assignments. No team members sit together, and normally only meet on their assigned meetings once a week. The fact that one member is situated in a different geographic location is not considered a problem within the team.

Dependency

There is a spread perception among the members on how dependent they are on each other to be able to do their assignments. However, the ones that see a dependence on other members believe that the dependence is not of such range that it could affect their possibility to perform their work, instead they see it as they can always find something else to work with in such a case.

6.2.3.2 Team B

Location and collaboration

The members of the team work with their assignments separately and they do not sit together but only see each other at the meetings. As with Team A there is a closer collaboration between I&V and MS which try to support each other in their tasks. The whole team are all gathered when the members from Luleå travel to Gothenburg, or the other way around, which only occurs every second month or so. From C2 (Luleå) there are several members in Team B and they try to sit and work together.

Dependency

As in Team A there is a spread perception of how dependent they are on each other in team B. The member from C2 see that the member from I&V is dependent on him/her, since if he/she does not deliver what has been planned for the inkrement, the I&V member cannot perform his/her job.

6.2.3.3 Team C

Location and collaboration

There seems to be a greater collaboration within team C than the other system teams. They perform their assignments by themselves as well, since their assignments are separated between the subsystems, but then they meet and sit together to discuss their work and how to handle problems that have occurred. The perception of how much they collaborate is widely spread among the members, but there is a comprehension among the members on how collaboration and working together could help them become more efficient and they would like to work more together as a team. They see that their way of working together today is inefficient and says as an example of this that if they would solve their problems together it could be fixed in 20 minutes instead of two weeks.

Dependency

In team C all member agrees upon them being dependent on each other. An example that were mentioned during the interviews were that I&V cannot prepare the integration and verification if the MS member has not written the requirements.

6.2.3.4 Team D

Location and collaboration

According to the members of team D there are discussions in the team on what they are working on and what they plan on doing but then they sit separately and work with their assignments. The phone is an important tool that they use a lot to talk to each other, otherwise they do not meet in the team on many occasions except for their weekly meetings.

Dependency

In team D the members do not have the same perception of how dependent they are on each other. Moreover, some members have the perception that they are dependent of some members in the team whereas they are not dependent on some other. One member feel that he/she is not dependent on the members in regard of him/her performing his/her tasks but that he/she is dependent on their feedback to be able to perform better.

6.2.4 Self- organization

This section covers how self-organized the teams are and what the leadership looks like within the teams.

6.2.4.1 Team A

Prioritization and Self-organization

Regarding prioritization and whether the members can choose themselves on how to prioritize what to do, the members have answered differently. The members from the subsystems I&V and Platform cannot decide themselves on what to do but are directed by their sub-project leaders. At Platform their sub-project leaders hand them the prioritization for the week whereas at I&V the sub-project leader gives the members more administratively tasks to perform. The members from C2 and MS is not provided with any restrictions from their sub-project leaders but are more self-organized, though they are required to do a time-report. Regarding self-organization the majority of the members feel that they can decide themselves over their time and that they are not strongly directed. However, one member has the perception that he/she cannot decide at all over his/her time and instead feel a strong direction from his/her sub-project leader. One member feels that there sometimes is too much self-organization that leads to a lot of stress in the end of a project since things have not been handled in time.

Leadership within the team

The team does not have a leader, but a person who is the organizer and thereby makes sure the team have meetings etcetera. Otherwise there is no leader, but all members have the right to an equal amount of decision-making. Regarding how controlled the members feel the answers were spread, from very controlled to not feeling controlled at all.

Trust from management

When asked about their perception on the trust they are given from managers, the members answered dissimilar. One member did not feel that the managers and leaders felt confidence that he/she could handle his/her job. The rest of the members did answer that they felt fully trusted by the management.

6.2.4.2 Team B

Prioritization and self-organization

In this team the answers were not very distinct. As with Team A the members from Platform must prioritize their work on what their sub-project manager directs. I&V have the freedom to prioritize their work by themselves but have some other tasks that they must perform, handed by the sub-project leader. The member from MS gives the perception that he/she has the freedom to prioritize the work by himself/herself but have a specific amount of hours to spend on different project which must be reported. At C2 the members can prioritize by themselves, but in Luleå they have teams as well in which they work with sprints and have to follow that prioritization. Regarding self-organization the majority of the members have the perception that they can decide over their working time themselves.

Leadership within the team

The team does not have an assigned leader. The member from MS is called the moderator since he/she organizes meetings etcetera but there is no one in the team who has the right of determination. In the matter of being controlled there were mixed feelings among the members. Some answered that they did not feel controlled whilst some felt that their sub-project leader gives them a lot of directives.

Trust from management

The team had a mutual understanding that the management trusted that they could handle their project and work but that the management still wanted to control and constantly get updated on how the team was doing.

6.2.4.3 Team C

Prioritization and self-organization

Generally, the members have the perception that they can prioritize by themselves and rather that the prioritization regards the needs from the team. The member from Platform mentions that their sub-project leader directs them in their work regarding what is needed from them. The I&V member mentions that he/she can prioritize by himself/herself but that the assignments that no one tells him/her to do suffers. In Team C most members feel that they are self-organized, and they see it as positive. However, one member can decide for himself/herself but always have to consult his/her plans with the sub-project leader.

Leadership within the team

The team does not have an official leader, but they saw a lack of organization and leadership and thereby took greater assistance from a sub-project leader that would organize their meetings etcetera, but he/she does not have any right of determination. According to some members the team indirect has a leader, which is the person of most knowledge and experience. Regarding being controlled most members had the perception that they are not controlled, instead everyone knows their roles and thereby they are not in need of any directives.

Trust from management

All answers from the members of team C were similar, that they had trust from the management but that the managers are in need of constantly controlling what and how they are doing. The perception is that the managers are under a lot of stress and thereby want a follow-up often. Some members feel that the managers have the wrong focus; controlling that all functions are performed instead of controlling that the functions work.

6.2.4.4 Team D

Prioritization and self-organization

All members give the perception that they can prioritize by themselves. However, the member from I&V prioritize in consultation with his/her sub-project leader. C2 sometimes have to prioritize from where they are needed, since they can work with a lot of different functions and products simultaneously. Everyone in this team communicated that they can decide over their own time, and thereby see themselves as self-organized.

Leadership within the team

As the other system teams, team D does not have an assigned leader. The member from MS has the organizing role which should not be interpreted as he/she has the right of determination. There is one member with more experience and competence on the product which can thereby be seen as the leader. Otherwise the member from I&V has the perception as only having one leader and that is the sub-project leader from his/her subsystem. Generally, the team members do not feel that they are being controlled but instead can decide for themselves.

Trust from management

The members have the perception that the managers trust them but in case the team is behind schedule the managers like to control everything that the team does, which can cause some stress.

6.2.5 Communication

This part covers how the team communicates with each other, whether they discuss their failures within the team and also if they talk about the members' strengths and weaknesses. Lastly, the paragraph ends with how the teams handle conflicts.

6.2.5.1 Team A

How they communicate

Team A communicates through their weekly meetings, where the representative from Luleå participate via Lync. Each member works independently which indicates that the team is not in need of much contact. If they need to communicate more during the weeks they normally do so via email or Lync. Everyone might not participate in the meeting if they feel that they do not have anything to update the other members about.

Discussion regarding failure and strengths/weaknesses

Generally, the members believe that everyone is open to discuss their failures, but it is not something that they have on an agenda. The team does not discuss the members' strengths and weaknesses. One member believe that they should have that discussion whilst one member does not find it necessary since he/she cannot see the purpose of it.

Conflict management

Team A does not have any conflict management and they do not believe that they have that many conflicts either.

6.2.5.2 Team B

How they communicate

The team members have a weekly meeting where they communicate. Apart from the meeting they do not communicate unless they have something that they need to deliberate, and in that case, they call or email each other. Not everyone participates in the meeting even though they are at the office, but they cannot provide a reason for why that is the case. They keep protocol from each meeting, which they post in confluence so that everyone can take part of the notes even if they did not participate. One member feel that some members have a lack of communication which leads to misunderstandings and unnecessary work.

Discussion regarding failure and strengths/weaknesses

In team B they believe that they discuss their failures within the team and that no one tries to hide anything. Discussions regarding the members' strengths and weaknesses is not commonly held. They believe that they have had such discussions once or twice if a member has needed help and not knowing who to turn to.

Conflict management

Team B does not have any conflict management. If they have conflicts and they cannot figure out by themselves how to solve it, they normally pass it on to their sub-project managers who will make a decision on what to do. Their conflicts normally address a customer requirement that they have interpreted differently in the team and thereby the conflicts are not personal.

6.2.5.3 Team C

How they communicate

Team C has a standard meeting each week but have had meetings more often lately since they have much work remaining. In excess of the meeting, some members meet to discuss their work and problems. They communicate with C2 mostly via Lync, but mention that Lync can be a disruption for the other members in their work. Team C also uses Jira to communicate, where the error-documents from the integration and verification ends up. The members of the team can keep track of what the rest of the members do since they have a backlog where all their tasks are gathered.

Discussion regarding failure and strengths/weaknesses

Each member of team C had the perception that they discuss their failures and do not try to hide if they have failed. There seems to be some discussions regarding the members' strengths and weaknesses in the team, and its purpose has as well been to give everyone a chance to speak their mind, even though they do not have as much experience as some of the members.

Conflict management

The team does not have a specific conflict management but if conflicts occur they often solve them by discussing the problem in the group. If the conflict is personal they normally take it personally with that member and if it is a conflict they cannot solve they take it to a manager who has greater understanding.

6.2.5.4 Team D

How they communicate

As with all the other system teams, team D has a weekly meeting where the whole team communicates and updates each other on how their work is developing. The MS member has a lot of contact with the members

from C2 through email and Lync but find that the contact with the member from I&V is not working as well. In excess of the meeting once a week, the members do not talk to each other regularly if they do not have any specific thoughts or questions.

Discussion regarding failure and strengths/weaknesses

The perception from Team D is that they discuss failures at some level, but it is not something they have on an agenda or something they experience that often. When it comes to strengths and weaknesses it is not something they discuss, rather something they know since they have been working together for such a long period of time.

Conflict management

Team D, as all the other system teams, do not have any conflict management. The members in the team have rather different answers on how they solve conflict in the group. One member's perception is that they do not solve their conflict but rather ignore them. Another member says that they do discuss their conflicts together in the team and normally do not have a problem to solve them.

6.2.6 Planning and Coordination

This section covers how they plan within the teams and in what way they work together.

6.2.6.1 Team A

Planning

The team has an inkrement-plan which they follow, and this plan covers the next three months ahead of them. They do not set up the plan by themselves, but together with a sub-project leader, where they decide what functions that should be compiled during that period of time. Constructing the inkrement plan takes a lot of time. Above the inkrement-plan the team does not make any other short-term planning but proceed with the inkrement-plan the whole time. However, the members have the perception that they always are behind schedule and are never able to produce what they are to in each segment. One member did not even know that the team had an inkrement plan, but he/she only follows the planning that his/her sub-project leader set up.

Coordination

Regarding how Team A is coordinated and in what way they deliver information to each other their plan is to work with handling over the information in batches called drops. The drops are the new functions and code that C2 has developed, that is to be delivered to I&V for integration and verification. The initial plan is that C2 will send the drops to I&V every other week, but this is not how it works in reality. Instead, they send all code from C2 in the end of each inkrement.

6.2.6.2 Team B

Planning

As in team A, team B has an inkrement-plan that they work according to. They develop the plan together with a sub-project leader, where he/she hands them the customer requirements which the team breaks down and specializes into functions which they then send back to the leader. The members describe the development of the inkrement-plan as a long and detailed process. The members from C2 takes the inkrement-plan and breaks it down to their own software development plan, but the rest of the members do

not make any short-term plans or similar. This team does not have a backlog but just keep their protocol from meetings in confluence.

Coordination

This team also works with drops which they try to send two till three times in each inkrement. The ultimate would be to have drops every week but currently the process is too complex for it to work since they are working with secrets within the defense. When I&V has tested the produced codes, the error-documents are sent to Jira, where C2 can access them straight away. A problem is that the process is long and slow and the people in C2 continue working after they have sent the code to I&V, which indicates that the code they sent fast becomes obsolete. In the end of each inkrement the programmers at C2 do not produce any new code, since it is too risky and instead just work on the error-documents.

6.2.6.3 Team C

Planning

This team both have an inkrement-plan for their long-term plans and uses a backlog in Jira for their short-term planning, in which they sit down together and plan. Though, it seems like only one member from the team works with the development of the inkrement-plan, which he/she does not interpret as the optimal approach since he/she does not know if the plan becomes ultimate for all of the members.

Coordination

Team C also works with drops. However, the process is so complex and problematic that they at the moment usually only hand over one drop each inkrement. Ideal would be to hand over the drops each sprint or once a week.

6.2.6.4 Team D

Planning

Team D as well has an inkrement-plan for each three month. The plan is developed by a sub-project leader in collaboration with one member from the team. Above the inkrement-plan the team does not have any specific short-term planning, but they do sit down on each weekly meeting and discuss what they will work with during that week. However, the result from that discussion is not something that they put on paper, but instead it is more of a general discussion.

Coordination

This team did not mention anything about having drops or if they just hand over everything to I&V for testing after each inkrement.

6.2.7 Sense of belonging

In this section aspects regarding how long the members have been in the team, how much time they spend in the team and how the unity etcetera is within the team will be presented.

6.2.7.1 Team A

Time spent in team

Wide spread among the members. Some spend almost all their time in Team A whilst some only spend 10%. Some members are only members of this team, whilst some are members in up to three system teams.

Amount of time working in team

Not all members have been part of the team since it started but this team does not have any recently added members either, this group of people have been working together for around a year. The MS member is only part of this team but does not spend 100% of his/her time on the team tasks, since he/she has other projects as well. All other members are part of other system teams as well and spend a small percentage of their working hours on this team.

Unity, belonging and trust

The members all believe that they have strong unity within the group and as well that there is trust between them members. Regarding if they feel a belonging to the team, the answers are more spread since the contact between some subsystems within the team is not the best.

Team Building, celebration of success and rewards

Team A has not had any team building activities. They do not celebrate success within the team, apart from when the whole department celebrates. There are no rewards within the team or for the team if they have performed well.

6.2.7.2 Team B

Time spent in team

No member in this team spend all their time in team B. As with team A, there is a spread of the amount of time spent on the team's tasks among the members. The members must prioritize the distribution of their time after what their sub-project leader commands.

Amount of time working in team

Only one member in this team has been part of the team since it was created about two years ago, the rest of the members became a part of the team only a couple of months ago and were members of other system teams before. No member spends 100 % of their time on the team assignments but have other assignments and projects as well. One member is part of three system-teams in excess of team B and see the teams' only function as a discussion place, and otherwise employees work by themselves.

Unity, belonging and trust

Regarding both the sense of unity, belonging and trust, the answers are not all positive among the members in team B. There seem to be small fights and irritation within the team, which affects the unity. They serve as a team when focusing on the processes and assignments but not as well on the personal level. When asked about the trust within the team, all members answer that they trust each other to perform well but that many members blame each other when things do not work out as planned.

Team Building, celebration of success and rewards

Team B have not had any team building activities. If they celebrate success it would be within the whole base program. As with team A they do not have any rewards.

6.2.7.3 Team C

Time spent in team

One member spends all his/her time on this team whilst the rest of the members have a lot of other tasks to prioritize. Also, those members are part of other system teams too. Furthermore, the members have a hard time to estimate their distribution of time among tasks and teams since it depends on what needs to be done in different inkrements.

Amount of time working in team

All members except one have been in the team since they started two years ago, and the most recent added member has been in the team for about a year. Two members are only members of the Team C, but they still spend a lot of time on other projects and assignments. The member from Platform sees it as him/her being a part of the Platform-team and that he/she only does assignments for team C.

Unity, belonging and trust

Most members believe they have a good unity within the team, but one member feels a stronger unity with his/her subsystem than with the system team. It is similar with the belonging, where some members feel that they belong to their subsystem and not so much the team. Moreover, the team members say that they trust each other and that they always tell if they will not be able to perform their tasks in time.

Team Building, celebration of success and rewards

The team has not had any team building activities, they say that there is no budget and no time for that. They do not celebrate success within the team, but many members celebrate with their subsystems. They do not have rewards.

6.2.7.4 Team D

Time spent in team

Most of the members in Team D are only part of this system team but still do not spend all their time on the team tasks but have other projects and assignments on their agenda. Their distribution of time on different tasks varies, just like in Team C, between inkrements.

Amount of time working in team

All interviewed members have been part of team D since they began working as a team two years ago. None of the members are part of other system teams and spend a great amount of time on their tasks from the team. However, the member from C2 spend a small part of his/her time on this team and sees the team in Luleå as the one he/she belongs to.

Unity, belonging and trust

All members believe that the trust and belonging to the team is very well. The unity has become better since they have worked together for such a long time and know each other well. Every time they are all gathered, which is when C2 are in Gothenburg, they all have lunch together. However, one member believes that all the stress has affected their unity negatively.

Team Building, celebration of success and rewards

Team D has not had any team building activities, but they do normally go out and eat when they all meet. They do not celebrate success and they do not have any rewards.

6.2.8 Evaluation and feedback

This section covers whether the team discusses how they work and if they have changed their practices since they started working together. As well, this section presents if the members give each other feedback.

6.2.8.1 Team A

Discussion and change of practices

Regarding if they evaluate their work and practices, the members answered differently. Two people do not believe that they discuss it at all whereas two believe that they do. Though, they have the perception that there are some discussions on how they can become better but that they do not use this to do anything about it. The members believe that they are allowed to spend time on evaluation but that it is not really a part of their job assignments and that there is low expectation that it would help. The team's way of working and practices has not changed at all since they started working together.

Feedback

All members have the perception that they get some feedback, but not enough. The feedback generally comes from their sub-project leader and not from the members in the team. C2 see the error-documents as feedback, since he/she gets information of what he/she has done correctly and what needs to be changed, so it could be described as that they receive feedback on their assignment but not how they perform their work.

6.2.8.2 Team B

Discussion and change of practices

Overall Team B does not discuss how they can change their practices and how they can become more efficient in their way of working as a team. The members believe that they are allowed to spend time on evaluation and similar but that it is something that they have to bring up themselves and therefore it has not been prioritized by them as a team. The members did not believe that they had changed their practices much since they started working in the team, but since most of the members are relatively new in the team they have difficulties to tell if this is the case.

Feedback

All members agree up on them not giving or receiving any feedback. They have a performance review with their sub-project leader but no personal feedback within the system team.

6.2.8.3 Team C

Discussion and change of practices

The majority of the members in team C believe that they do not discuss their practices at all, whilst one member say that they evaluate themselves often, so the perception is diverse. The perception of the team in general is that they all believe they would gain something from evaluating themselves, but that they need someone who ensure that they do it, because they do not take the initiative themselves.

Feedback

Generally, Team C does generally not give each other feedback within the team. Some members see the error-documents as feedback on their tasks, but giving feedback is not something they have on an agenda.

They do not receive feedback from any external party either, just information regarding if they have not performed well or produced what they were supposed to during the inkrement.

6.2.8.4 Team D

Discussion and change of practices

Team D does not discuss and evaluate their practices. Their reason seems to be that they have a routine in the team and that they do not see the purpose of changing now since they are in the end of the project. They have some problems with other divisions that deliver functions to the team and they have tried to make those practices more efficient but have not considered this regarding how they work within the team. The members do not believe that they have changed their way of working since they started in the team.

Feedback

The members have the perception that they in some sense get feedback. In the end of each inkrement they normally sit down together and talk about how it went and then they usually acknowledge each other. One member feels they have been stressed lately, making the feedback suffer as well as the feedback becoming more negative.

6.2.9 Motivation

This section covers if the members feel stress in their daily work and whether they are under a lot of pressure. As well all members have been asked what motivates them at work and what decreases their motivation.

6.2.9.1 Team A

Stress and pressure

Regarding stress the members of team A believe that they are stressed in their daily work but that it is not a stress that affects them negatively. However, the member from Platform do feel negatively stressed and has done so during the last six months. Regarding pressure to perform the members do not have a negative experience.

What increases motivation

Regarding the question what makes you motivated, all members of team A answered differently. One person described the people around him/her as motivation boosters whilst one got motivated by the thought of performing well. Some members got motivated by their assignments and by being able to satisfy the customers. The majority of the members felt motivated by their job today, whilst one could not find the motivation in his/her current tasks.

What decreases motivation

As with the answer above, the members of team A had different views on what decreases their motivation. Two members brought up being controlled and having to do tasks that feel unnecessary and one member also mentioned that when the management do not listen to his/her suggestions he/she feels less motivated.

6.2.9.2 Team B

Stress and pressure

In team B the stress level is relatively low. It is only the member from Platform that feel stressed and has done so for a long time since they have to few resources. The members do not experience very much pressure in their work, apart from when they are performing a task and someone is standing behind them watching.

What increases motivation

There were a mix of answers regarding what motivated the members of team B, ranging from problem solving to the people and environment around them. The members agreed upon wanting to have the opportunity to continuously improve and develop and also to dispose their own time. All members felt motivated at their current work place.

What decreases motivation

Several members from team B mentioned performing unnecessary tasks as decreasing the motivation. They explained that they today have to spend a lot of time on bureaucratic tasks and reports, that might not be used. One member mentioned unnecessary stress as well as unreasonable demands and time-plans as un motivating.

6.2.9.3 Team C

Stress and pressure

The perception from team C is that no member is feeling very stressed in their daily work. The member from Platform however mentioned feeling stressed often, but until now the stress has not reached a negatively impact on his/her motivation.

What increases motivation

The answers regarding what motivates the members at their work place were rather similar from all members in team C. The members prefer fun and interesting assignments, and it is positive if it includes problem solving. One member specifically pointed out that he/she needed to have the power to control his/her time. In general, the members believe that they are motivated by their work but that it could increase if they had more freedom.

What decreases motivation

In team C the members become unmotivated when they have to perform tasks that they believe to be unnecessary and when they feel controlled. One member mentioned that their team has been down-prioritized for a long time and therefore they have not been able to perform, which affects the motivation.

6.2.9.4 Team D

Stress and pressure

There does not seem to be that much stress in the team, they experience it as existing in periods. The team is used to receiving inkrement-plans that they will not be able to reach, and thereby this does not create much stress any more. They do not feel a lot of pressure to perform, apart from pressuring themselves to perform well. Two members mention that they get stressed about performing tasks which they do not believe to be their assignments, and which feel unnecessary.

What increases motivation

The answers to this question was spread among the members of team D. For example, one member gets motivated by collaborating with other people, one by problem solving and another one wants to perform well and see the reaction of the people that he/she has satisfied. All members believe that they are motivated by the work they do today.

What decreases motivation

The members of team D mentions, as well as many of the other system teams, that having to perform tasks that are unnecessary affects their motivation negatively, for example spending time on fixing spelling mistakes in reports which will not reach the customer. One members also brought up that he/she feels unmotivated when management and work colleagues makes decisions without asking him/her.

7. Part B- Analysis

This chapter covers the analysis of the system teams at Saab Airborne. The analysis have been conducted in a way in which the collected data regarding the system teams, which is presented in chapter 6.1 *Empirical data of the studied system teams*, have been analyzed by looking at the conducted framework of high performance teams, presented in 5.2 *Framework describing High performance teams*. The analysis is divided into different sections, in which each section covers a category in the framework. Each section ends with a rating, performed by the authors of this thesis, of each team regarding that specific category. The purpose of the ratings is to provide the reader with a clearer picture and overview of where the teams stand today in becoming high performing, according to the framework. Further, in this chapter the teams will still be referred to as Team A, Team B, Team C and Team D instead of their real names. The authors have also chosen to analyze the teams together and not separate them into different sections as done in chapter 6.1 *Empirical data of the studied system team*. The reason for this is that the authors find that the analysis becomes more robust and interesting when the teams are analyzed together, and it also prevents iterations, which could otherwise occur since the teams have relatively similar practices. What the framework says about each category will be presented in each section since it provides the reader a clearer overview of what the teams are being analyzed on. The analysis is composed of an introduction of the way the system teams work in each category, followed by the framework and thereafter the analysis of that category.

7.1 Goals

Regarding the perception of the goals in the teams, Team A had very different answers from the members and they also answered from their subsystem's goals instead of those of the team, which also was the case of Team B. The answers from Team C and Team D were more consistent. All members in these teams answered with the same goals, and in Team C not just their goals for the product but their goals as a team as well. None of the system teams wrote their own goals, instead all were taken from the inkrement plan. However, in Team B and Team D the team sit down together to break down the provided goals into sub goals. Team A and Team C gave the perception that some of the members were relatively regulated by their sub-project leader and were provided goals from there instead.

Goals	The team should have clear goals that should be communicated to all members. There should be regular discussions and updating of the goals to assure all members have the same comprehension of the goals and to avoid confusion. The goals should be challenging, concrete and current.
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When looking at what the framework says about goals, all members of the teams should have the same comprehension of their goals. Team A and Team B did not perform very well in this topic since the members did not have the same answers regarding what their goals were. All members could generally say what their goal with the project was, to build a specific function, but they could not provide any broader purpose or goals than that. Team C and D were better in this regard since the members had the same perception of what their goals were. It is difficult to comment on if their goals are challenging, concrete and current, since so many members presented different goals. Though, they all work with a very complex system so it is not hard to believe that the teams have challenging goals.

None of the teams wrote their own goals but use the ones given to the team and the goals from project leaders. This could create difficulties for the members in knowing what to prioritize, and to know what is most important for the members; their system team or their subsystem. It is good that Team B and Team D sit down together and break down the goals, that indicates that they spend time on discussing their goals and as well make the goals more adapted to the team. There were no real answers if Team A and C did discuss and update their goals regularly, but the perception was that they did not since they did not even present the same goals.

Generally, the perception of the authors is that the teams does not work with their goals as much as they should, though the two highest rated statements in the survey was regarding the teams' goals. The system team members did rate 3.5 on both statements "The team members agreed on the team's goals" and "The members have a clear picture of the groups goals". The question then becomes if the members really know what is meant with team goals. It feels like the members do not know what they are supposed to accomplish as a team, more what tasks each member have in the team's general assignment. The authors do not believe that they discuss their goals often enough and that all members do not have the same comprehension on what they are to accomplish. Seldom the members gave an direct and fast answer on what their goals were, which is an indication of them not really knowing what their goals are.

7.1.1 Rating

From the analysis above the authors have chosen to rate the system teams according to figure 8 below.

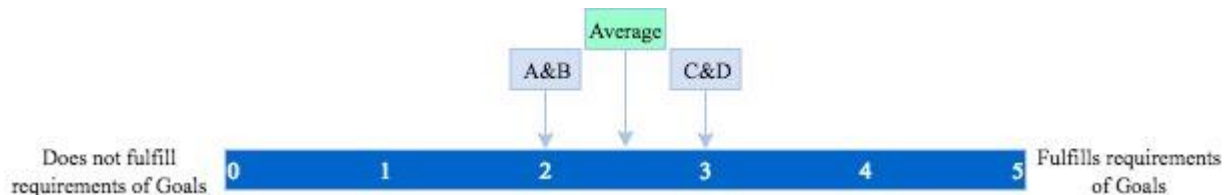


Figure 8 Ratings of Goals of the system teams by the authors

7.2 Member contribution

When looking at the teams and what knowledge they have within the team, almost all members answered that they themselves had a broader knowledge whereas their team members' knowledge were more specialized. The exception was Team C in which all members had the perception that they themselves and the other team members were T-shaped, meaning they have a deeper knowledge within their own area of expertise but as well a general knowledge about the whole system. All teams believed that they had a knowledge overlap and therefore could discuss problems with each other, though Team C said that they do not use this overlap.

In general, the members in Team B and Team D believed that they contribute with knowledge and experience to their team. In all four teams the members know what their assignments in their teams are, but only some can convey what their roles in their teams are. In Team A one member had an organizing role

whereas one member in Team B and several members in Team C had the perception as being the one holding the group together.

Member Contribution	Each member should bring the right skills and knowledge to the team to complete the designated task and it should be clear what competence and experience is expected from each member. Having some overlap between members regarding competence is positive since it fosters collaboration. The team should consist of the least amount of members that is required to perform the task. As well, the team members need to have a positive attitude towards teamwork and be open for change.
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When comparing the teams with the framework, all teams see it as them having an overlap in their competences, which makes collaboration possible. But the perception from the interviews was that the members work within very different areas and assignments and that it would be hard to collaborate more than they do today, which is minimal. Generally, the members do have the right knowledge for their tasks. Some members might not have enough knowledge but since they work with developing innovative complex products it is difficult to say if there are any people who possess that specific knowledge. Regarding the members' openness towards teamwork there is a lot of difference between each member. Some members really believe in their system teams and would like them to become better at collaboration and more efficient in their way of working, whilst some members seem to believe that the teams are unnecessary and do not see the point in them being a part of it at all.

Regarding the team consisting of the least amount of members to perform the task, it is difficult to provide an opinion. Almost all team members answered differently when asked how many they were in their team and therefore it is hard to say if it is the right amount, since they do not know themselves how many they are.

Generally, the system team members know what their assigned tasks are within the team and all members seem to have a clear picture of what is expected from each individual. But, when it comes to what roles they have within the team and in the teamwork the division of roles are not as obvious. Many people within the same team see themselves as having the organizing role, which indicates that a lot of these team members like to have an overall view of what is going on, which could be good for the teamwork, since it shows that they are interested in each other's work.

7.2.1 Ratings:

From the analysis above the authors have chosen to rate the system teams according to figure 9 below.

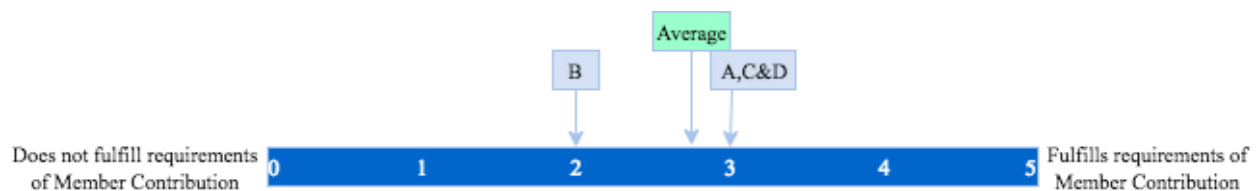


Figure 9 Ratings of Member Contribution of the system teams by the authors

7.3 Mutual support and collaboration

Regarding working together and collaborating within the system teams, Team A and Team B work relatively similar. Each member does his/her assignments by themselves and, if needed, the team discusses the performed work together afterwards. In these two teams the members from MS and I&V have a closer collaboration than with the rest of the members, where they try to sit together and support each other in their tasks. In Team D the members work separately, but they normally sit together and have discussions on what each member works with and what their plans are. In Team A, Team B and Team D the members do not meet that often, normally just at their weekly meetings or if the members from C2 are in Gothenburg or the other way around. Though, in Team B they have several members from the team in Luleå and, according to the C2 member, the members in Luleå sit together while working. Team C has a closer collaboration than the other teams. They normally do their assignments by themselves, since their tasks are very different between the subsystems but then they meet and sit together to discuss the problems that have arisen. The members of Team D also conveyed that they would like to collaborate more and understand the effect it would have on their efficiency. Being dependent on the other team members in their team is something that Team C believe they are, for example that I&V cannot prepare their job if MS have not written any requirements. However, in Team A, Team B and Team D the perception of their dependency within the team are spread. Many members believe that they in some sense are dependent of their team members performing their job, but that they can always find some other task to do if that would not occur.

Mutual Support & Collaboration

The team should have a cooperative mind-set and collective thinking, meaning they support and help each other in performing their tasks, and consider the team as "we" rather than individuals. Their competences overlap to enable collaboration and discussion and increase the amount of viewpoints, which leads to more adequate decisions. The team should be collocated.

From the interviews with all system team members, the perception is that the teams do not have a cooperative mindset and as well that there are few members who think of their teams as "we" instead of a couple of individuals working with the same product. Out of the 15 interviewed system team members there were only a couple that mentioned that they sit together and work and help each other with their tasks. None of the teams are collocated, many of the members are not even working at the same geographical location. Since they do not sit together or not even close to each other they miss out on a lot of spontaneous communication and as well the positive overhearing. As mentioned in the previous section they have overlapped competence which fosters collaboration, but it is not something that they use and take advantage of. An interesting aspect is the one from the framework regarding the members helping and supporting each other, which only seems to exist between the subsystems MS and I&V. Perhaps their tasks and assignments are more similar and thereby foster collaboration. The question is if any of the other subsystems are similar as well so that they could work more together but do not know it, or if they have too different tasks which actually makes collaboration impossible.

It is good that the members are dependent of each other since it give the members a reason to communicate and foster discussion; that there are reasons for them being a team. Though, this is not the perception that the authors received at the interviews. Rather it is that the members feel pressure to perform so that the other members also can perform their tasks. As well, it is interesting that the members within the teams answered

differently whether they are dependent of each other or not. That creates a question if the members do not know what the rest of the members within their team do, and thereby if they are dependent of what they do or not.

The framework indicates that the members should have a cooperative mindset and collective thinking, and the perception is that these are not that present among all members of the system teams. It feels like all members have their own tasks and that they sometimes have to communicate with the other members since they are working on developing the same product, but that they otherwise do not see the function of the team. There is a perception that there is a lack of drive from some of the members. The collaboration within Team C seemed to be much better than the rest of the teams, they already worked more together and gave the impression of wanting to collaborate more. The collaboration is obstructed due to them not sitting together and not talking frequently.

Generally, the support and collaboration within the system teams is not well-functioning. They do not have a lot of team-mindset and it seems difficult to develop since they do not know who is part of the team. As well, the location in Luleå for all members from C2 does not have the best effect on the collaboration, especially not since this is the subsystem that stand for the most part of the production for the product. They miss all the positive overhearing by not sitting together and only conversing by Lync and email.

7.3.1 Ratings

From the analysis above the authors have chosen to rate the system teams according to figure 10 below.

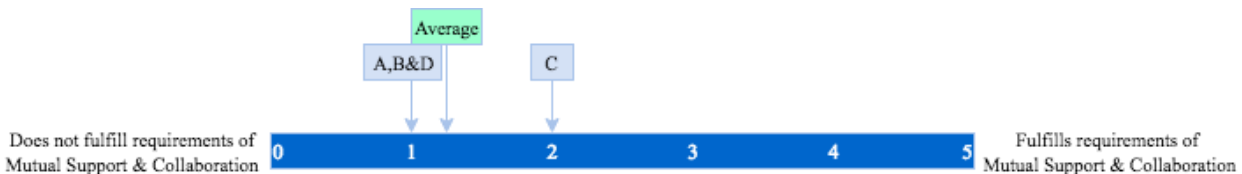


Figure 10 Ratings of the Mutual Support & Collaboration of the system teams by the authors

7.4 Self-Organization

Regarding prioritization of work tasks and whether the members can prioritize by themselves the answers from the interviews were very different depending on what subsystem the members are part of. In general, the members from Platform receive their prioritization from there sub-project leaders and the members from I&V also receive much directives from their sub-project leader. All members from MS had the perception that they could decide for themselves on what to do, they just had to time-report what they have spent their time on. The members from C2 work with sprints in Luleå and prioritize thereafter. When asked about self-organization, surprisingly almost all 15 members answered that they could decide about their own time and therefore they were self-organized. None of the four system teams have an assigned leader in the team. In Team A, Team B and Team D they have one member which is the organizer or moderator, but all members distinctly communicate that this role does not come with the right of determination. One team felt that they missed some organizational leadership and therefore assigned a sub-project leader to take that role, though he/she does not have any right of determination either. When asked about their leaders, there were a couple of team members that mentioned their sub-project leaders as their only leader. All team members were asked

if they felt like the management trusted them to do their job. As with many other questions, the answers were spread. Most interviewees answered that they felt fully trusted by the management, especially everyone within Team A. Though, the perception among the other teams were that the management trusted them but that they wanted constant update on how they were doing. One member pointed out that the managers had their focus wrong, they wanted to check what things that had been done instead of looking at what things had been done in the right way and thereby worked functionally.

Self-Organization	The team should be self-organized, which indicates that they make their own decisions and plan their own work. Management will give the team a task, but the team will decide for themselves how to operate it. The team should have a leader who is there to coach, consult and facilitate the members' daily jobs. Both the leader and the team should be transparent in their work, to increase everyone's knowledge of the current situation.
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The framework emphasize that the team should be self-organized since it fosters productivity and also motivation. The members of the teams say that they are self-organized but the question is whether they know what it means. Because, it feels contradictive that half of the members cannot even prioritize for themselves and still they believe that they are self-organized even though many of them are directed by their sub-project leader. Though, when dealing with such a large and complex project it might not be as easy to just provide someone a task that they can perform in what way they want, since they are so dependent on other functions and the customer requirements. Some subsystems are very dependent on their sub-project leader, and the question is if this is a dependency that have been forced upon them or something they have chosen themselves. The same question applies for the consulting from their leaders, if they are they asking for it or if it is forced upon them.

According to the framework the team should have a leader, a leader that is consulting and coaching. The members do not have a leader within the team and no one who is in charge of the team. If they need consulting on what to do, each member has their separate sub-project leader from their subsystems and thereby no leader in common. Since the sub-project leader is not involved in the teamwork, collisions could occur when the team wants one thing and the sub-project leader another. Due to these reasons, the authors do not believe that the teams are self-organized. They receive requirements in the inkrement plan, which they do not plan themselves, meaning that they almost get directed on what they are supposed to do. Further it is clear that the members from Platform and I&V are more controlled than the other subsystems. Regarding Platform the obvious reason could be since they have a lack of resources and thereby needs to focus the ones they have on what is important at the moment, but in regards to I&V the reason is unknown.

In regards of the trust on the team from the management, the interpretation could be both that the management have trust as well as them having the wish to control. It is a bit contradictive of the members to communicate that they feel trusted and at the same time say that the management wants constant update of what is going on. Though, the perception is that the project is behind schedule which leads to a lot of stress and pressure for the management to perform and show results. As well, the projects at Saab Airborne are several years long, which indicates that the management needs to get some updates on how the team is doing. Generally, it is good that most members have the perception that they are being trusted by the management, even though they feel controlled in some aspects.

In general, the teams do not have the best leadership, in this case since there is a lack of leadership. There is no one that the whole team can turn to and consult with and who has an overall picture of all the functions within the team. However, most members feel relatively positive and pleased about how they operate today, and the question is if this is because they feel united and close to their sub-project leaders. Moreover, self-organization is connected to autonomy, challenges and cross-functionality. Cross-functionality is fulfilled in the team, whereas the autonomy and challenges are not met in the same range. When the management wants to interfere in the team's way of performing their tasks the team is not autonomous. Challenges refers to the team setting their own challenging goals which indicates that the team needs to work together and find more efficient ways of working to be able to reach those goals, which does not coincide with the way these system teams operate.

7.4.1 Rating

From the analysis above the authors have chosen to rate the system teams according to figure 11 below.

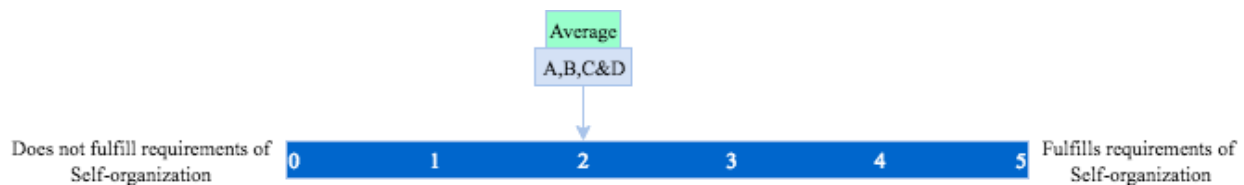


Figure 11 Ratings of the Self-organization of the system teams by the authors

7.5 Communication

Regarding how the teams communicate with each other they, all have a weekly meeting where they update each other on what they are working on and how it is going. However, from Team A all members do not always participate if they do not feel that they have something specific to talk about. One member of Team B believed that they had a problem with miscommunication and that it often led to misunderstandings and unnecessary work. Apart from the meeting it is only Team C that communicates more regularly. They regularly meet to discuss their tasks and problems and try to come up with solutions together. All teams keep connected with C2 in Luleå through Lync or email, but the communication is only brought up if they have any questions or similar. Team C keep protocols at all meetings that they post in confluence, so that each member can take part in what they have discussed even though they did not participate. Moreover, Team C is the team with the best communication structure. They have a backlog in Jira in which they post all the functions they need to produce, and in this way all members can be updated on the other members work. In Team D the members believe that the communication is much better between some subsystems, MS and C2 have good contact whilst I&V does not participate as much. All four teams have the perception that they discuss their failures and that no one is afraid to admit if they did not succeed with a task. But it is only Team C that believe they have discussions regarding the members strengths and weaknesses, and they are very persuasive that everyone should speak their mind. However, Team D believe that they have worked together for so long and therefore know each other so well that such discussion is not needed. None of the four system teams have any conflict management and generally they solve their conflicts within the teams differently. In Team D they normally ignore the conflict even though it is obviously there, in Team C they

try to discuss it in whole group and Team B they normally pass it on to a sub-project leader if they have disagreements.

Communication	The communication should be open, frequent and direct, and be held face-to-face. Frequent meetings are of high importance to increase communication, but informal communication is also important, and increases when the team is collocated. All members should participate in the communication and everyone should be heard. The team should have reflections on performed work and discuss failures and how to improve their performance.
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The framework indicates that the team should have direct, frequent, open and informal contact. These aspects do not coincide very well with the system teams. They have meetings once a week, which is not particularly frequent, some members even choose not to participate in the meetings and some are not at the same geographical location. The members of these system teams talk way too seldom to become a high performance team. The teams miss out on the informal communication since they do not sit together. In Team B they make a lot of mistakes due to miscommunication and since they often only speak at the weekly meetings. The results from the survey showed that the highest rated statement was the one regarding the team having an open communication structure, where 12 out of 15 respondents answered that they totally agree with the statement. Hence, the members believe that they have an open communication which is good. Moreover, the authors of this thesis believe that they have an open communication at Saab and they seem to be transparent. It is not good that some members choose not to show up at the meetings only because they do not have anything to communicate. This type of behavior indicates that these members are not interested in what the rest of the members are working on. As well it shows that some members are only focused on their own work and what they are to produce instead of thinking as a team, as being a part of a “we”.

The authors believe that the team members might not know each other that well and therefore the informal communication suffers, since they have problem talking to each other regarding subjects that do not cover their project. One team member mentioned that he/she rather email than call the people that he/she does not know that well. A negative side effect of using email instead of calling is the risk of misunderstandings, which could lead to additional work.

The framework points out the importance of discussing failures. The interpretation is that these teams are open and transparent of their failures, which is a good feature. However, the teams probably discuss their failures of producing their functions but not their failures in their teamwork and thereby their approaches and way of working. As well, they do not discuss their strengths and weaknesses within the teams, which would be a good communication method to get an interpretation on how the members complement each other and who should have which responsibility. A problem within these teams is that they only see how different their assignments and tasks are and therefore they cannot see how they can complement each other and help each other.

It is interesting that members within the same team can have different interpretations on how they solve conflicts and whether they have conflicts or not. Wheelan (2013) writes how important conflicts are for the teamwork, that it strengthens the team. These teams communicated that they did not have that many conflicts, but that does not seem too strange since they do not work that much together.

Generally, the communication within the teams could be better. In teamwork it is important that the team sit together and frequently talk to each other, which is not the case in these teams. They only talk to each other if they have to, and the authors perception is that they try to avoid contact to a great extent.

7.5.1 Ratings

From the analysis above the authors have chosen to rate the system teams according to figure 12 below.

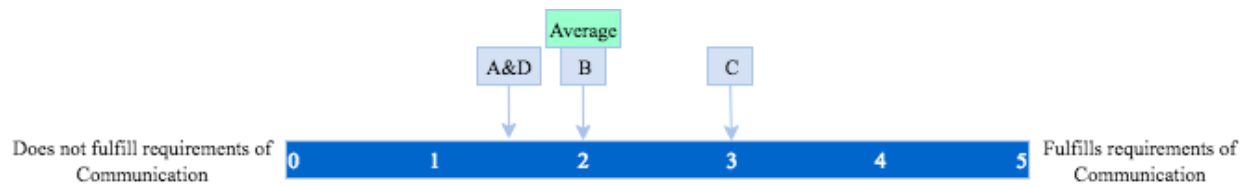


Figure 12 Ratings of the communication of the system teams by the authors

7.6 Planning and Coordination

All four system teams have an inkrement plan which covers the closest three months of their project. None of the teams compile the inkrement plan by themselves but a sub-project leader hands them the requirements which they break down to requirements that suits them. In Team C and Team D there is only one member in the teams who works with the inkrement plan with the sub-project leader, in the other teams they do it together as a team. Team A, Team B and Team D does not break down the plan and create their own sub-goals within the team, instead they follow the inkrement plan. Team C on the other hand use the inkrement plan for their long term goals but then have a backlog in Jira where they keep their short term planning. Something to mention is that one member of Team A did not even know that they had an inkrement plan for his/her team, but he/she only followed the plan that the sub-project leader set for him/her. All the teams communicated that the construction of the inkrement plan is a long and detailed process that they spend a lot of time on.

Regarding the teams' coordination of their work, they all work with drops. All teams would like to send all produced codes in drops several times an inkrement, but often this is not the case. Team A would like to send drops every other week but it normally ends up with them sending drops once an inkrement. In Team B they send drops 2-3 times each inkrement, their goal would be to do it every second week but since the process is long and slow they cannot send them that often. A problem within Team B is that the code they have produced in C2 fast becomes obsolete while I&V are working and therefore their work do not become that efficient. Team C also describes the drops as a complicated process and therefore they normally just have one drop each inkrement, even though they would like one each week.

Planning & Coordination	It is of importance that the team sit down together and discuss and plan an approach that they will use to solve problems and make decisions. Thereby, creating a mutual understanding among the team members of their work structure. The discussions should cover how to structure tasks, budgets, schedules and deliverables. However, they should not apply too many rules and policies since it hinder motivation.
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It is good that Team C has a backlog since it indicates that they have divided their plan into sub-goals which makes it easier to get an overview of what everyone is supposed to do. It is also good that they sit down together and break down the plan. A negative aspect is though that it is only one member from the team that constructs the inkrement plan, it is not the most efficient approach since he/she could misinterpret the requirements that do not cover his/her area. The same applies to the other system team in which only one member constructs the plan, and in this team they do not have shorter time-plans but just one that covers three months ahead. This can be compared to Scrum, in which they only plan for three weeks ahead of them. And in Team A there is even one member who does not know that they have an inkrement plan, which is an indication that the team does not do as is said in the framework, that they should discuss tasks and schedules in the team. Moreover, these system teams do not have their own budget and since some members are controlled by their sub-project leader they cannot discuss their schedule that much.

The general perception of these system teams is that they have a lot of policies and rules that they have to follow. An example is the inkement plan, in which they have to spend a lot of time just to construct in the right format. It would have been good if they could work with the drops in the way that the teams intended, because now the system is inefficient and a lot of time and resources are spent on unnecessary things. Though, it is a process that needs total restructuring which is not something that the teams can change themselves.

The general perception of how the system teams work within planning and coordination is that they could improve. They can spend more time together to make their own time-plans and goals but a lot of the other things that the framework covers is not really up for the teams to decide and change. The inkrement plan is a great amount of work on which they would like to spend less, as well with the drops that they would like to send every other week or so but cannot due to the inefficient process.

7.6.1 Ratings

From the analysis above the authors have chosen to rate the system teams according to figure 13 below.

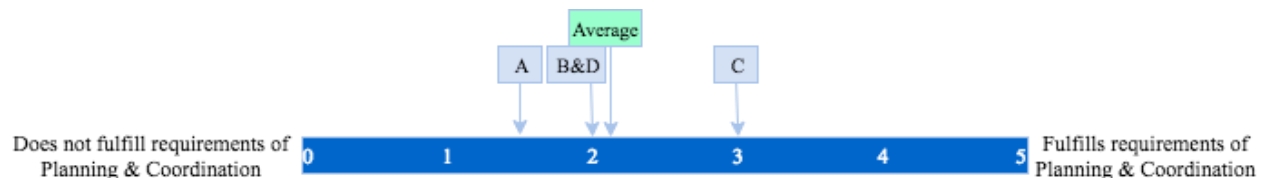


Figure 13 Ratings of the planning & coordination of the system teams by the authors

7.7 Sense of belonging

When it comes to the teams and how much time they spend in their system teams, none of the 15 team members spend 100 % of their time working with assignments for the team. In Team A some members are only part of this team whilst some are part of several teams. The members spend 10% till 100% of their time in the team, which is a wide spread. Not all members of Team A have been in the team since it started two years ago, but the ones that are members now have been working together for about a year. As well in Team B, none of the members spend all their time in the team. Moreover, some members explained that they prioritize and decide how much they work on tasks from what their sub-project leader says. In Team B there

is only one member who has been in the team since the start, the rest of the interviewees have only been working in the team for approximately six months. In Team C one member is part of only this team, and the rest are in several teams. How much time they spend on each team depends on the period they are in. The members of Team C have all except one been in the team since the start, and all current members have been working together for a year. Team D is the team in which all interviewed members are only part of that team, though none of the members spend all their time on team tasks. All interviewed members of Team D have been in the team since the start.

All team members of the system teams describe the trust for each other in the teams to be strong. It is only in Team B where they experience that people say that they trust each other but they also tend to blame each other as well, instead of taking responsibility. Regarding the unity in the group there is a spread perception among the teams and their members. Team A believe that they have strong unity, as well with Team C. Team B experience a lack of unity in their team since fights and irritation affects it. In Team D the perception is that they have good unity since they have been working together for a long time but that the stress that they are perceiving has a negative effect on the unity. When talking about the sense of belonging to the team, the members of Team A had varied answers, some believed it to be good whilst some did not, since they almost do not talk to each other. In Team B the interpretation is the same, they do not have a strong sense of belonging, some of the members believe that they are in the team to do an assignment, they are not there on a personal level. In Team C many of the members believed that they had a stronger sense of belonging to their subsystem and not so much the system team. The members of Team D had a strong sense of belonging to the team.

None of the four system teams have had any team building activities. In Team D they normally go out and eat when they are all together. None of the teams celebrate their success together, sometimes they celebrate within the base program or their subsystems, but nothing within the teams. As well, no teams have any rewards.

Sense of Belonging	Sense of belonging to the team is one of the most important aspects to create an efficient team. The team should have a strong unity and have good relations between the members. To increase the team spirit the members should be part of team building activities, and it is positive if they also spend time together outside of formal meetings or events. The team members should be dedicated to one team and spend 100% of their time working with the team's tasks. To develop as a team and feel comfortable in the team it is required that they work together for a longer period of time, preferably a year. Having good unity increase the social support and safety, which favour motivation and happiness. Celebrating success is also a way to enhance motivation and performance, as well as feeling personal success when performing well, since it increases the sense of belonging to the task.
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According to the framework of the characteristics and practices of a high performance team, the members should be dedicated to one team and spend 100 % of their time on that team. These characteristics do not coincide with the system teams at Saab Airborne. None of the 15 interviewed team members spend 100 % of their time on their team and there are only a few of the members that are only part of one system team. Team D and Team C have had the fortune to keep their members in their teams, and therefore they have been working a longer time together, which according to the framework is of importance for them to develop as a team. Team A and Team B, on the other hand, have not been working together for such a long time

which indicates that they might not have developed as much as teams. This reflects on the team's trust and unity which could be seen in Team B, where they have more problems with fight and irritation compared to the other teams. It was as well in Team B where they had problem with miscommunication which is explained in chapter 7.5 *Communication*, which hence could be a consequence of them not being a mature work unit. In general, it is not good that that many members are part of several teams since it lead to them having a problem prioritizing their work and of course also affect their sense of belonging to the teams. If they would only be part of one team they could put all their effort into getting to know each other and increase their unity, for them to be able to perform their best. The perception from the authors is that the teams do not really think about these soft issues, they do not perceive that their team spirit or team building activities could have an impact on their work.

The teams should have strong unity and strong relations between the members for them to be able to become high performing. Many of the members and teams believed that they had strong unity but it is interesting to know what they base that on. They do not really know each other within the teams and they rarely ever meet. As written in 7.2 *Member Contribution* they do not even know how many members they are in the team and who is a part of the team, and hence it could be difficult to have strong unity within the team. Some members even believed that they were not a team at all, leaving a question how the unity can be strong. Team D experienced good unity since they had been working together for such a long time and therefore everyone knew each other, which is an indication that the period of time they have been a team affect their unity and sense of belonging. The authors believe that the team members in these system teams need to be faced with a group of people to which they feel strongly connected and thereafter be asked about their unity with their system teams and see if they answer differently.

The framework indicates that team building activities are of importance to increase the team spirit. None of the system teams have had any activities of this kind and some members implied the reason to be that they did not have time or budget for it. What Saab and the teams need to understand is that they can have these types of activities outside of their working hours and that they can do a lot of things that are not expensive. If the teams would start to spend time together outside of the office they would get to know each other on a personal level and hence work better together. The team building activities provide an indirect value for the teamwork, and will benefit the teams in the long run. Team D mentions that they eat lunch together and go out and eat, which is good and much more than the other teams do. Furthermore, especially important for Team B would be to spend more time together as a team since they have not been working together for a long time and it is important that the members feel welcomed and a belonging from the beginning, or else their perception of the team will be negative from the beginning. Each team should as well start to celebrate their success, it would both benefit their team spirit but also be appreciated by the members since it fosters motivation. It does not have to be any large celebration, just that they as a team together celebrate that they have done a good job and accomplished something together.

Generally, the perception of the authors is that the sense of belonging in the teams is not the best. Many of the members express that their unity and belonging to the team is good, which is positive. However, the apprehension by the authors unfortunately is not the same. Maybe the members do not dare to say that their teamwork and team spirit is not the best since it does not look good for the team. But at the same time a lot of members were not shy to tell that they felt a lot more belonging to their subsystem than the team, were the problem probably lays. If the members have a subsystem that they feel like they belong to and which they work along with much more than their system team, it could lead to difficulties for the system teams

to become high performing. When the members of the teams are stuck in a problem they do not have a leader or someone responsible for the team to ask, but instead they have to ask their sub-project leader for their subsystem. It is not surprising that the team members feel greater belonging to their subsystems, since there seem to have been not enough effort from the management at Saab Airborne to develop the system teams. The management at Saab Airborne needs to understand that it is required a lot for a team to become high performing, and even to become a little bit efficient. They cannot only look at what the team produces and judge them according to that, but that they also have to look at the soft values that in the end will affect their productivity the most.

7.7.1 Ratings

From the analysis above the authors have chosen to rate the system teams according to figure 14 below.

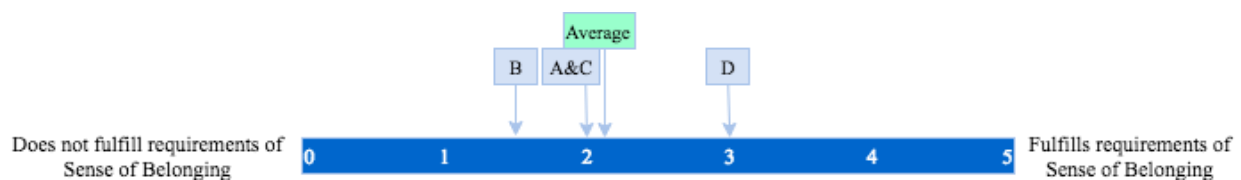


Figure 14 Ratings of the sense of belonging of the system teams by the authors

7.8 Evaluation and feedback

In the interviews with the system teams the members were asked whether they keep discussion in their team on how they can become better and if they evaluate themselves. Most members' perception were that they did not have any discussions at all that covered their practices and how they work. In Team A half of the members believed that they did discuss it and half did not. Moreover, the members of Team A feel that they come up with a lot of ideas on how they can be more efficient in their way of working but they do not execute the ideas. The members of Team A believe that they are allowed to spend time on evaluating their work but they do not see the purpose of doing it. Team B and Team D do not discuss their practices at all and do not evaluate their work. Team D sees it as them following a routine and do not see the purpose of changing it. Team C as well does not evaluate their work but do see what they could gain from doing so, but they need someone to tell them to evaluate it, since none of the members will take the initiative. None of the four system teams have changed their practices and the way they work in the team since they started.

Regarding feedback the teams have varied perceptions. Team A believe that they get some feedback, but not enough and the feedback that they receive normally comes from their sub-project leader and not the team members. In Team B and Team C the members communicate that they have a great lack of feedback, however one member from Team C said that he/she considers the error-documents as feedback. They do not get any external feedback either, just information if they have not performed as planned within the inkrement. Team D has the perception that they get some kind of feedback. In the end of each inkrement they normally sit down together and talk about what they have done well and acknowledge each other. One member in Team D has felt that the stress they have experienced lately in the team has made the feedback suffer and made everyone more negative.

Evaluation & Feedback	The team should evaluate their work, discussing what they did well and what they can improve. They should reflect upon what they can do better and then change their behaviour accordingly. The team members should receive and give regular feedback to/from the leader and the other team members. Having regular feedback will contribute to continuous improvements as well as developing the individuals and help them to reach their goals.
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According to the framework the team should sit down and evaluate their performed work. Overall, the system teams do not do this, they also do not change their way of working and try to become more efficient. Some people say that they have discussions within the team but that they do not lead to any changes, and maybe the reason could be that they do not see the purpose of it. But of course, it is also hard to change their behavior and practices when being in a routine and when there is no one who tells them they are supposed to work on it. The perception of the authors is that the management might not think enough about how these teams can become better performing, they mostly focus on what the teams deliver and if they keep their schedule. There are no incentives for the team members to spend time on trying to increase their teamwork since the management mostly focus on them doing their assigned tasks. What they miss is that their tasks would be more efficiently performed in the team if the group of people actually worked as a team. None of the teams' practices have changed since they started working together which means that they found an approach in the beginning of their teamwork and since they never evaluated it, they have not changed it.

Receiving feedback on performed work is very important for an individual's motivation and as well for them to be able to continuously improve and this characteristic is something that the system teams need to work on. Currently the feedback within the team is almost non-existing and the one that is given is through error-documents. As well, there is no feedback at all regarding how they perform their tasks and how they are as members of a team, the feedback only covers what they have produced. From the results of the survey it can be viewed in *chapter 4.1.4 Results of the different statement*, that the statements that covered the members receiving and giving feedback were three out the five statements that had the lowest ratings among the members.

7.8.1 Ratings

From the analysis above the authors have chosen to rate the system teams according to figure 15 below.



Figure 15 Ratings of the evaluation & feedback in the system teams by the authors

7.9 Motivation

This section covers the category Motivation. In this section the matters that could affect the team members' motivation are declared.

Regarding if the members feel stressed and pressured to perform at their workplace there were spread answers. In Team A all members felt stressed in their daily jobs, but it was only the member from Platform that experienced it as negative stress. None of the members had experienced any specific pressure to perform. In Team B the answers were pretty similar, the member from Platform had been stressed for the last six months due to lack of resources. Otherwise the stress level and pressure were perceived to be low. In Team C no member felt pressure to perform but as well in this team the member from Platform felt stressed, though it had not developed to negative stress yet. In Team D two members experienced stress sometimes due to being addressed tasks that did not belong to their job assignment. Above that, the stress level in Team D felt fairly low. One member perceived that the only pressure they are put against is the one they create themselves.

All members were asked what motivate them at their workplace. Almost all members had different answers; the people and environment around them, the thought of performing well, problem solving and the opportunity to develop and continuously improve. In Team A all members except one felt motivated by their daily tasks. In Team B, Team C and Team D all members expressed themselves to be motivated at their job. However, the members of Team C experienced that the motivation could increase drastically if they were offered more freedom.

Regarding what decreases the members motivation at work all teams answered that they did not appreciate to perform unnecessary tasks, as in tasks that they do not see the value in. Many members experience that they have to spend time on bureaucratic tasks and reports and for example spend hours fixing spelling mistakes. Members of Team A and Team C also mentioned being controlled as decreasing their motivation. Moreover, unnecessary stress, unachievable time-plans and when management do not pay attention to their suggestions were the matters that affected the members motivation in a negative way.

Motivation	Being motivated is of great importance for individuals to increase their performance. Having motivated individuals as well as fulfilling the previous mentioned terms in this framework is important for the team's performance. It is important to understand that all individuals are motivated by different things, and also to understand when these change and discuss it with the members in order to sustain the motivation once it is found.
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When looking at the stress level for the members it is not well that a lot of members from Platform have experienced negative stress for a longer period of time. Stress is something that the company look at seriously since it easily affects an individual's health. Therefore, it is of importance that the management as fast as possible try to hire some more people for that department or in another way decrease the stress. Apart from the members from Platform it seems like the stress level and the amount of pressure they are put through is at a reasonable level.

Regarding what motivates the employees the answers proved what is said in the framework, that all people are motivated by different things. Hence, management and the leaders need to figure out what motivates each individual to make sure that they become motivated by their tasks, since this could create great benefits for the teams' performance. It is positive that many members experience that they are motivated by their work today though it is important to take into account what they said in Team C, that their motivation could increase a lot.

It is interesting that unnecessary tasks occurred among the teams. It seems that they do spend a lot of time on writing reports and defining requirements. Obviously, all bureaucratic tasks cannot be removed but maybe they should look over the opportunity of decreasing the reports that will not reach the customer and thereby only be handled internally. If they spend less time on these tasks they will have time to spare for their real assignments which they feel motivated performing.

Overall it is important that the management of Saab knows how much their employees' motivation affects their performance and that they really try to take advantage of that knowledge. The teams will not be rated in this category since motivation is part of the other categories, and hence is indirectly rated. Also, there is no suitable way of saying how each team performs in motivation, and even if there was, the authors of this thesis would not have enough knowledge on the subject to rate it.

7.10 The ratings of the System Teams

Since the system teams have been rated by the authors in all categories of the framework except for motivation, it is simple to present an overall perception of how the teams are performing today. If the system teams fulfilled the characteristics and practices described in the framework they would have received a rating of 5 in the categories. Otherwise, the ratings correspond to their way of operating the teams according to what the framework says. The authors' average rating for each team was: Team A 1.8, Team B 1.7, Team C 2.4 and Team D 2.1. The results indicate that the teams are not fulfilling the characteristics and practices from the framework. Though, Team C and Team D performed better than Team A and Team B, which in general have been presented in the analysis above. Important to convey is that the ratings are for how the teams operate and not the individuals' performance.

The results from the conducted survey indicated that three out of four system teams rated themselves so that the results implied that they were in stage 1 or 2 in their group development, presented by Wheelan (2013). Team D was the team that rated themselves a bit higher and got a result of being in stage 3. According to Wheelan (2013) stage 4 is where the team starts to become high performing, whereas stage 1 and 2 are when the teams are trying to develop a sense of belonging and develop their goals together. Team C did not have a higher rated result in the survey, as they did by the authors, instead their rated result from the survey was the second lowest of all teams. There could be several reasons for why the rating of the team differs from the rating of the authors of this thesis. First, the rating of the authors of this thesis is based on the framework, and not the survey presented by Wheelan (2013). While in many aspects evaluating the same things, the base of the two ratings do differ. Here, it could imply that Team C is actually performing relatively well in the characteristics found most important by the authors, while not as well in the aspects measured by Wheelan. Another reason for why the ratings differ could be due to difficulties understanding the survey. In the case of the members having problems understanding, or misunderstanding, the survey they were provided, the answers could present a different result than what was found by the authors. Also, due to the formulation of the answers in the survey, the interviewee might have trouble choosing between total disagreement, partly disagreement, partly agreement or total agreement, and choosing the lower alternative not to overrate themselves. One final example of why the ratings differ could be due to the members of the team not believing they perform well in the aspects the authors of this thesis believe they do. While the authors are considering several viewpoints of each aspect, the team might only think of one situation or

similar when rating themselves, creating different results. These reasons could also be considered, but in the opposite way, when discussing why Team D rated themselves better than found by the authors.

8. Discussion

The main purpose of this research has been to investigate what characteristics and practices a high performing organizational team has and to find the gap between the way the system teams at Saab Airborne operates their teams today, compared to the characteristics and practices of a high performance team. The way a team operates can have a great impact on the team's performance and thereby their efficiency. With teams becoming common in organizations, it is of great importance to know how to enable these to become efficient, in order to create benefits for the entire organization. Interviews and a literature study have been used to create a framework describing high performance teams, and to investigate the system teams at Saab Airborne. To fulfill the purpose of this master thesis, two research questions were formulated and are presented below.

8.1 Research question 1

“What practices and characteristics should an organizational team have in order to become/remain high performing?”

The construction and analysis of the framework regarding high performance teams answer this research question. According to the authors of this thesis, the nine categories in the framework presented in 5.2 *Framework describing High performance teams* is what characteristics and practices a high performing team possesses. This could certainly differ between teams and businesses, depending on size of the organization, current situation and organizational structure as well as the company's age or difficulty to change. But the categories in the framework are the factors found most important considering the research conducted, and are considered to lead teams towards becoming more high performing, regardless the type of organization. However, it is important to understand that these are found important by the authors of this thesis, not implying that they are, in all situations, the most important factors. However, according to the authors, by fulfilling these, the possibility of the team to become or remain high performing is higher than if not fulfilling some or all of the categories.

8.1.1 Connections between categories

One interesting aspect noticed when finalizing and analyzing the framework is that several of the categories are connected. By improving one, others might also be improved. For example, if changing and improving the communication structure, an effect on Mutual Support and Collaboration could occur. By communicating more often and hence creating a better knowledge of the current situation between the members, situations where collaboration is possible could occur, and the members' willingness to ask for help could also increase if they more often discuss the current situation with each other. Also, by improving the communication structure, and hence also improving the amount of informal communication, the members might get to know each other better, increasing the Sense of Belonging in the team. These are only a few examples, but showing that the categories connect in several ways. Since the fulfilling of more than one of the categories is believed to improve the possibility of becoming high performing distinctly, there could also be said to be synergy effects between the categories. Hence, improving all of these categories

would be the most preferred in order to become a high performance team, but to improve one or a few is still preferred over not improving any.

8.1.2 Categories consisting of both soft values and concrete recommendations

Important to notice is that many of the categories regard soft values, and might hence not be found to be concrete. This could imply that several of the categories are difficult to change only due to a decision from the management. For example, while it is possible for management to decide that there should be a change in the communication structure within the teams, such as meetings every day that all members have to attend, the management cannot decide that the members' motivation should increase. They can take actions in order for the motivation to increase and decide that focus should be put on increasing motivation, but they cannot tell a member that his/her motivation needs to be higher. Hence, this might seem less concrete and also more difficult to implement, but nevertheless, it is important to not disregard that category. Having self-organization is similar. The management can decide that the team should be self-organized, but it might still take time before that type of leadership becomes natural and provides result. Even though some of the categories regard soft values, it is important to understand the indirect value these could create. There are several changes and improvements that require long periods of time to show effect, but it is important to understand the value of spending time and effort on these categories anyway, to receive the positive effects later in time.

In general, one of the most important factors is that management understands how these characteristics can affect a team and its efficiency. They further need to understand that a team does not become high performing in one day, only due to compiling a group of very capable people and calling them a team. Even though the members could be capable and skillful as individuals, this does not imply that the team will become high performing, instead the management needs to understand that team dynamics have to be created in order for the team to be efficient, and there are several aspects affecting this dynamic. By understanding and working on improving these categories, the team will have a larger possibility of becoming high performing, which would be positive both for the team and the entire organization. Hence, it is of great importance that the management understands the importance of supporting the team, with e.g. resources and training. This way they can improve both concrete and soft characteristics and practices, and focus on both short-term and long-term effects of how the team operates, in order for them to become a high performing team.

8.1.3 Similarity to Agile teams

Another conclusion made was that when considering the created framework, it has several aspects in common with the description of Agile teams. In chapter 3.4.2 *Agile Teams* it is written, among other things, that Agile teams should contain all components needed. This is similar to the category Member Contribution, where the importance of the required width of skills is mentioned. Furthermore, Agile teams indicate that members should be dedicated to one team, as in Sense of Belonging, and that the teams should be self-organized, as mentioned in the framework. Moreover, collaboration, communication and feedback are also mentioned as important, all having categories in the framework as well. This could for example be due to the fact that the interviewed well-functioning teams all worked according to Scrum, which is a part of Agile. Adding to this, working according to Agile has been seen as a great way for teams to become efficient, and hence reflecting in theory. However, by looking at the framework some further aspects are

mentioned, and according to the authors of this thesis, working with Agile is one way of becoming efficient, while considering all of the categories in the created framework in this thesis is another way to become efficient. The authors believe that it in some cases could be easy to decide to follow a strategy, such as Agile, mostly because it is popular at the moment. One risk is then to only use a few of the aspects in the strategy and believe that will create a tremendous improvement. The authors of this thesis instead want to emphasize the characteristics and practices found most important without naming it as a specific strategy, to create a clear overview of what to consider when working to create a high performance team.

8.2 Research question 2

“Based on the results in the previous research question, what is the gap between the practices and characteristics of a high performing team in general, and system level R&D teams in a complex high-technology context in particular?”

The second research question has been elaborated by analyzing the practices and characteristics of four system teams at a complex high technology company, Saab Airborne, with the framework regarding high performance teams from the first research question. All organizational teams can use the framework to improve their teamwork, but no specific gap can be found which is general for all teams in complex high-technology organizations. The specific gap studied was between the four system teams at Saab Airborne and the framework describing high performance teams. This is since this report is a qualitative study and it is hard to generalize from such research. Though, a thick description of the context in which this thesis has been performed is presented in this report, which makes it possible for organizations with similar context to use the results.

Overall, there is a large gap between the System teams and high performance teams. The results from the conducted survey resulted in 3 out of 4 System teams rating themselves to be in stage 1 or 2 in their group development, whereas a high performing team should be in stage 4. As well, the authors’ analysis of the teams indicated that the system teams have a total average rating of 2, where 5 represents a high performance team. Hence, by looking at the ratings that have been made both by the team members themselves and the authors of this thesis, the system teams are not high performing. The gap between the way they operate their assignments today and how they would work if they were a high performance team is rather large.

However, all aspects of the system teams are not deficient. The team members seem to have a very open communication structure in which they are not afraid of showing that they have made a mistake or failed at a task. As well the teams have a wide spread of knowledge among the team members. This knowledge width is useful when producing such complex products, especially since there is a knowledge overlap between the members which opens up for discussions and the members being able to help each other. The division at Saab Airborne, in which the system teams are working are, developing complex products which indicate that the employees have challenging goals to reach and the possibility to develop and improve their way of working. These aspects are good for the members’ motivation, which as well the members experienced as high.

8.2.1 The reasons why the teams do not perform at a high level today

Even though some aspects work relatively well today, there are many different aspects to review in order to understand why this gap exists. A rather important part of teamwork is the possibility for the team to collaborate which can increase other characteristics that represent a high performance team, such as frequent communication and sense of belonging. The different assignments and knowledge areas for the members within the system teams today could be a reason for their lack of collaboration, which could affect their performance. As well, collocation of the team is important for the collaboration and communication, but since some team members are located in Luleå it is currently not possible. The activity-based workplace they have at Saab Airborne today is not optimal for teams, since there is no area assigned for teams and for collaboration. The work place is designed for individual work.

Generally, the members of the teams did experience that they performed well and had adequate teamwork, the general perception were that they were satisfied in their way of working today. The reason why the teams are not performing well is not the team members fault, they are operating their teams' from their pre-requisites. None of the team members have had any training or education on how to best work within teams. The teams are composed of engineers and programmers who are there to develop hardware and software to build a product. The responsibility lies on the management within Saab Airborne, it is their obligation to make sure that the teams are trained and thereby use the practices and have the characteristics that a high performance team represent.

An obstacle towards becoming high performing mentioned in the theory is the reluctance towards working in teams. Some people within the system teams showed a clear reluctance towards being a part of these teams and the problem can as well be that members do not believe that the team can create better results than when they work individually. Another reason to why the system teams are not high performing today could be their lack of leadership. There is no assigned leader within the teams and they have no general leader outside the team either. Today, if they have any thoughts or inquires, each member turns to their sub-project leader from their subsystem. The theory also presents the organizational structure as an obstacle towards becoming high performing. The theory refers to the biggest problem being that the organizations are built for individuals which makes it hard for the employees to know if to follow their job description or their team. The greatest problem for Saab Airborne is the organizational structure in which the employees do not know if to follow their team or their subsystem, since they are part of both. Therefore, the employees might not know what is most urgent and what to prioritize, causing the employee to feel discomfort in deciding about their work time. As well, a problem lies in members being part of several system teams. Being part of more than one team could decrease the sense of belonging as well as the unity in the team. Since these aspects are considered important, a decrease could negatively affect the performance.

The theory chapter presented the importance of the organizational support for teams and that the team needs to be trained in how to work within teams, which they do not at Saab Airborne today. As well, external units within the organization need to show interest in the team in other aspects than what they produce and perform, which there is lack of today.

The authors perceive one of the greatest problems with the system teams today to be that they perform fairly well. They do not fail on developing their functions, they are good, but they can be better at teamwork. Therefore, since they are able to deliver, the management do not prioritize to use resources on the teams'

development and to make them more efficient. It is difficult to promote a change in a function that works. Moreover, Saab Airborne is a large organization with thousands of workers. The system teams are a very small part of this organization, and therefore the management might not see the value of using resources on these specific teams, which could seem contradictory after reading this master thesis since its whole focus has been on these four teams. However, this organization is in need of someone external to look at the way they operate with critical eyes, for them to be able to change and provide them recommendations on how to develop their teams into becoming high performing.

9. Conclusion

To summarize what has been discussed in the previous section, a final conclusion is provided. For a more detailed and developed explanation of the stated conclusion, reading chapter 8. *Discussion* is recommended.

Regarding the first research question, it has been concluded that several characteristics and practices affect the possibility of becoming or remaining high performing. It is difficult to state specific actions for a company to take to enable teams to become high performing, since it depends on several factors. However, according to the authors of this thesis, following the high performance teams framework builds a foundation for a team to become more efficient. Hence, the management and the team should focus and put effort on the following categories; Goals, Member Contribution, Mutual Support & Collaboration, Self-organization, Communication, Planning & Coordination, Sense of Belonging, Evaluation & Feedback and Motivation. By fulfilling the described characteristics and practices of these categories a team could increase their efficiency and become high performing.

Regarding the second research question, the gap found is only applicable for the specific case study of this thesis. There was found to be a large gap, originating from the teams not fulfilling the categories in the framework, as described in the discussion, but instead performed intermediate or less on several. For example, the teams' communication structure is not optimal, as well as them having a lack of feedback and evaluation, structured goals and sense of belonging. There is hence a need to focus on how to be an efficient team. In general, the members of the system teams seem to be willing to work in teams, but have a lack of knowledge on how to make the teamwork efficient. Hence, management needs to provide time and resources to develop the teams, and educate them in how to reach and remain in an efficient state. In the following chapter a recommendation will be provided to Saab Airborne on what actions to take that possibly could improve the performance of their system teams.

10. Recommendation

This chapter presents a recommendation for further actions on how to operate the four system teams at the division System Design Mission System at Saab Airborne. The recommendation will be a general recommendation for all four system teams. For the System teams to be high performing they need to change their way of working in teams. However, there are no actions to take that immediately will change their performance and all the characteristics and practices that are presented in the framework cannot be implemented without complications. Therefore, this recommendation will focus on the communication, collaboration and leadership within the team. The focus will be on these three aspects since they affect other characteristics and practices positively as well, and hence can provide great benefits for the teams' performance. The golden circle by Sinek (2009) that is presented in chapter *1.1 Background* will be the guide for this recommendation. This means that the recommendations will be regarding what to focus on and why these aspects are important. It will hence not focus on how the recommendations should be implemented since this master thesis has not focused on that aspect.

Firstly, the members should only be part of one system team at the time, and they should be devoted to that team and not change between the teams. This factor is of great importance for the teams' unity and their team spirit. It is better that the teams have more than one assignment to focus on than that the members are part of several teams.

The teams need to increase their collaboration. Collaborating at a higher rate will have a positive effect on the communication in the team, but as well the team members have a chance of getting to know each other and increase their team spirit and thereby their sense of belonging as well. If the team increases their sense of belonging by collaborating more, there is a great chance that the members' motivation increases too. In general, individuals become motivated by social support from the people around them and collaboration is essential for the team motivation. The first action the teams should take, to foster their collaboration, is to plan together. At the moment, the formulation of the inkrement-plans is a workload which takes a lot of time, and all members are not part of the process. Instead, the team members should all sit down together with the sub-project leader and elaborate what the plan should include. They should as well try to make the process more straight forward, and try to exclude the elements that do not add value, since the members experienced a decrease of their motivation when performing unnecessary tasks, which the theory on motivation confirms. The teams are as well recommended to break down the plan to sub-goals and keep them in a backlog. The backlog will serve as a visualization of what they are to do, and the whole team can thereby increase their understanding of what the rest of the members in their team are working on.

An effective way of increasing the collaboration is by collocating the team. However, there are two obstacles regarding this recommendation. Firstly, at Saab Airborne they have an activity-based workplace, meaning that there are no assigned workplaces for teams. Therefore, Saab Airborne needs to consider if they can do some remodeling to enable teamwork. Secondly, each system team consist of software developers who are located in Luleå, which indicates that a collocation of the whole team becomes problematic. The recommendation that would convey the greatest effect on the teams' performance would be to move all software developers to Gothenburg, but this recommendation seems unlikely to be implemented. Hence, the authors recommend the team members that are located in Gothenburg to collocate and instead of moving

the members from Luleå to Gothenburg, try to interact more with Luleå than today. The collocation of the team would as well be an intervention that would foster the teams' communication structure.

The second aspect, communication in the team, could increase if the team sits together and perform their work, the informal and face-to-face communication will increase drastically. As well, the authors' perception is that the team members do not know each other well today, if they would sit together this situation would quickly change and hence increase the sense of belonging and unity in the team. The team members should get together and have discussions on how their communication structure should be composed, when they should have meetings and what these meetings should include. The authors recommend, to increase the communication and as well the collaboration, that the teams have daily meetings in which they update each other on what they are working with and if any problems have occurred. These daily meetings should not be longer than a couple of minutes, but it is of importance that all members participate, including the ones from Luleå. The teams should as well include meetings regarding evaluation and feedback in their communication structure. If the teams do not evaluate their performed work and their way of working, they will not improve and make their operations more efficient. This also includes the feedback, which in the case of being constructive will help the members improve, and in the case of being positive will increase their motivation. However, before the teams implement all these changes they should have some team building activities to provide energy to the team to go through the changes, and as well increase their team spirit. Moreover, the team building activities should be scheduled regularly and not be a onetime experience.

The third aspect that Saab Airborne should consider is the leadership. If they change their leadership it could as well have positive effects on the motivation and communication. The teams need a leader within the team, since they need someone to turn to in times of trouble or if they need consultation. The internal leader should not control the members and give directive, but rather facilitate their job. This leader should be the one who has contact with the external leaders, so that the members can focus on their tasks. This leader could still be part of the team and work similar to a Scrum master. They can have one member at the time being the leader, and change within the team. This is something the teams can decide for themselves, since some teams might have a designated leader already whilst some might not. The leader within the team should coordinate what external information that reaches the team and thereby make sure that the members are not overloaded with information and hence have to prioritize what to take into account. The internal leader will decide what is important and what is not necessary for the members to take part of. Moreover, there should be an external leader responsible for the team. This leader should be the person which the team turns to when they have problems or questions, and thereafter the leader can redirect the concerns to other external parts if necessary. Each team should have their separate budget, which the external leader could be responsible for. The way the teams' leadership is constructed today is not optimal if they wish to perform better. It is important that they have a common leader so that they all have the same prioritization, there should be no external factors directing the members in what to do, instead the members are to work according to the team's goals. The aim is that there should be no direct leadership within the teams, the decision should be executed by the members themselves, and hence the decision making should be at an operational level. The above mentioned recommendations coincide with self-organization and the authors would like Saab Airborne to have self-organized teams. However, to implement self-organization at a company that produces complex products like the ones Saab does is hard since their projects are very long and they have many customer requirements to take into account. Therefore, the recommendation for Saab

Airborne is to implement the above mentioned changes among leadership but not to put too much focus on fulfilling all the requirements of being self-organized at the moment.

Many of the recommendations that are defined in the sections above are characteristics and practices that benefit from a certain type of organizational culture in support of teamwork. The theory states that the culture at the company needs to be taken into consideration since the culture is not something that is easy to change. Therefore, some of the characteristics and practices might not be easy to implement at Saab Airborne due to their cultural aspects. Saab is a mature and large organization in which the culture has evolved during a long period of time. Though, Saab might have to work on changing their organizational culture to a culture more suitable for teamwork, since many benefits for working in teams come with the change.

If implementing the recommended practices and characteristics that are described in this chapter, the system teams at the division System Design Mission System at Saab Airborne are one step closer to becoming high performance teams.

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Appendix I – Survey

Checklist for team performance

1. Who is being interviewed?

Vem intervjuas?

2. What team does this person belong to?

Vilket team tillhör denna person?

- ☐ MTS
- ☐ PDS
- ☐ R&R
- ☐ Link E
- ☐ Other team at Saab/ Annat team på Saab
- ☐ Volvo
- ☐ Combitech

3. Sex

Kön

- ☐ Woman/Kvinna
- ☐ Man/Man

4. What subsystem does the person belong to?

Vilket delsystem tillhör personen?

- ☐ Mission System
- ☐ Platform
- ☐ I&V
- ☐ C2-Luleå
- ☐ Other/Annat

5. The members have a clear picture of the group's goals.

Medlemmarna har en klar bild av gruppens mål.

- ☐ 1. Total disagreement/ helt oenig
- ☐ 2. Partial disagreement/ delvis oenig
- ☐ 3. Partial agreement/ delvis enig
- ☐ 4. Total agreement/ helt enig

6. The members agree upon the group's goals.

Medlemmarna är överens om gruppens mål.

- ☐ 1. Total disagreement/ helt oenig
- ☐ 2. Partial disagreement/ delvis oenig
- ☐ 3. Partial agreement/ delvis enig
- ☐ 4. Total agreement/ helt enig

7. The groups' assignments require that we work together.

Gruppens uppgifter kräver att vi arbetar tillsammans.

- 1. Total disagreement/ helt oenig
- 2. Partial disagreement/ delvis oenig
- 3. Partial agreement/ delvis enig
- 4. Total agreement/ helt enig

8. The members have a clear picture of their roles.

Medlemmarna har en klar bild av sina roller.

- 1. Total disagreement/ helt oenig
- 2. Partial disagreement/ delvis oenig
- 3. Partial agreement/ delvis enig
- 4. Total agreement/ helt enig

9. The members' assignments correspond to their abilities.

Medlemmarnas olika uppgifter stämmer med deras förmågor.

- 1. Total disagreement/ helt oenig
- 2. Partial disagreement/ delvis oenig
- 3. Partial agreement/ delvis enig
- 4. Total agreement/ helt enig

10. The group leader's style changes when it becomes necessary to meet the group's emerging needs.

Gruppledarens stil förändras när det blir nödvändigt för att möta gruppens framväxande behov.

- 1. Total disagreement/ helt oenig
- 2. Partial disagreement/ delvis oenig
- 3. Partial agreement/ delvis enig
- 4. Total agreement/ helt enig

11. The group has an open communication that lets all team members participate.

Gruppen har en öppen kommunikationsstruktur som tillåter alla medlemmar att delta.

- 1. Total disagreement/ helt oenig
- 2. Partial disagreement/ delvis oenig
- 3. Partial agreement/ delvis enig
- 4. Total agreement/ helt enig

12. The group regularly gets feedback on their productivity.

Gruppen får regelbunden feedback på sin produktivitet.

- 1. Total disagreement/ helt oenig
- 2. Partial disagreement/ delvis oenig
- 3. Partial agreement/ delvis enig
- 4. Total agreement/ helt enig

- 13. The members give each other constructive feedback.**
Medlemmarna ger varandra konstruktiv feedback.
- 1. Total disagreement/ helt oenig
 - 2. Partial disagreement/ delvis oenig
 - 3. Partial agreement/ delvis enig
 - 4. Total agreement/ helt enig
- 14. The group uses the feedback regarding their efficiency to improve their way of working.**
Gruppen utnyttjar feedbacken om sin effektivitet till att förbättra sitt sätt att fungera.
- 1. Total disagreement/ helt oenig
 - 2. Partial disagreement/ delvis oenig
 - 3. Partial agreement/ delvis enig
 - 4. Total agreement/ helt enig
- 15. The group spends time defining and discussing problems they have to solve.**
Gruppen ägnar tid åt att definiera och diskutera problem som den ska lösa.
- 1. Total disagreement/ helt oenig
 - 2. Partial disagreement/ delvis oenig
 - 3. Partial agreement/ delvis enig
 - 4. Total agreement/ helt enig
- 16. The members spend time planning how to solve problems and make decisions.**
Medlemmarna ägnar tid åt att planera hur de ska lösa problem och fatta beslut.
- 1. Total disagreement/ helt oenig
 - 2. Partial disagreement/ delvis oenig
 - 3. Partial agreement/ delvis enig
 - 4. Total agreement/ helt enig
- 17. The group uses efficient strategies for decision making.**
Gruppen använder effektiva strategier för beslutfattande.
- 1. Total disagreement/ helt oenig
 - 2. Partial disagreement/ delvis oenig
 - 3. Partial agreement/ delvis enig
 - 4. Total agreement/ helt enig
- 18. The group develops methods for evaluating their solutions and decisions.**
Gruppen utvecklar metoder för att evaluera sina lösningar och beslut.
- 1. Total disagreement/ helt oenig
 - 2. Partial disagreement/ delvis oenig
 - 3. Partial agreement/ delvis enig
 - 4. Total agreement/ helt enig
- 19. The group's norms encourage performance, quality and success.**
Gruppnormerna uppmuntrar prestationer, kvalitet och framgång.

- 1. Total disagreement/ helt oenig
 - 2. Partial disagreement/ delvis oenig
 - 3. Partial agreement/ delvis enig
 - 4. Total agreement/ helt enig
- 20. The group's norms encourage innovative solutions.**
Gruppenormerna uppmuntrar innovativa lösningar.
- 1. Total disagreement/ helt oenig
 - 2. Partial disagreement/ delvis oenig
 - 3. Partial agreement/ delvis enig
 - 4. Total agreement/ helt enig
- 21. The group has the minimum number of members that is needed to achieve the goals.**
Gruppen innehåller minsta möjliga antal medlemmar som krävs för att målen ska uppnås.
- 1. Total disagreement/ helt oenig
 - 2. Partial disagreement/ delvis oenig
 - 3. Partial agreement/ delvis enig
 - 4. Total agreement/ helt enig
- 22. The group has been given enough time to develop a mature work unit and achieve their goals.**
Gruppen har fått tillräcklig tid på sig för att utveckla en mogen arbetsenhet och uppnå sina mål.
- 1. Total disagreement/ helt oenig
 - 2. Partial disagreement/ delvis oenig
 - 3. Partial agreement/ delvis enig
 - 4. Total agreement/ helt enig
- 23. The group has strong unity and collaborate well.**
Gruppen har stark sammanhållning och är bra på att samarbeta.
- 1. Total disagreement/ helt oenig
 - 2. Partial disagreement/ delvis oenig
 - 3. Partial agreement/ delvis enig
 - 4. Total agreement/ helt enig
- 24. Periods of conflict occurs often but they are shorthold.**
Konfliktperioder förekommer ofta men är kortvariga.
- 1. Total disagreement/ helt oenig
 - 2. Partial disagreement/ delvis oenig
 - 3. Partial agreement/ delvis enig
 - 4. Total agreement/ helt enig
- 25. The group uses efficient strategies for dealing with conflicts.**
Gruppen använder effektiva strategier för konflikthantering.

- 1. Total disagreement/ helt oenig
- 2. Partial disagreement/ delvis oenig
- 3. Partial agreement/ delvis enig
- 4. Total agreement/ helt enig

Appendix II - Interview templates

General introduction in all interviews

Interviewee:

Name:

Company:

Department:

Role:

Team:

The interviewer gave a brief introduction to what the study is about and described its purpose.

Interview template system team members Saab

General Questions:

- 1. For how long have you worked here? Both at Saab and your current position?**

Hur länge har du arbetat här? På Saab och i ditt nuvarande område?

- 2. What is your former education?**

Vad har du för tidigare utbildning?

Team:

- 3. How many people are you in your team?**

Hur många är ni i ert team?

- 4. How long have you been working in this team?**

Hur länge har du jobbat i detta team?

- 5. Do you spend all your time in project teams?**

Spenderar du all din arbetstid i projektteam?

- a. What projects are you part of now?**

Vilka projekt är du en del av nu?

- b. What does your distribution of your work look like?**

Hur ser din fördelning av arbetstid ut?

- c. How do you prioritize?**

Hur prioriterar du?

- d. Do you cooperate with the tasks within the team?**

Hjälps ni åt med arbetsuppgifterna inom teamet?

e. Do you sit together and work?

Sitter ni tillsammans och arbetar?

6. Would you say that you have a broad or a deep knowledge?

Skulle du säga att du har en bred kunskap eller djup kunskap?

a. What type of knowledge does the rest of the team members' have? Broad or deep?

Vilken typ av kunskap har resten av teamet? Bred eller djup?

b. Does your general knowledge in the team overlap so that cooperation is possible?

Överlappar er generella kunskap inom teamet så att det finns en möjlighet för er att samarbeta?

Function:

7. Why are you a team?

Varför är ni ett team?

a. What is the function of you as a team?

Vad är funktionen av er som team?

b. What would happen if you were not a team?

Vad skulle hända om ni inte var ett team?

8. What are you supposed to accomplish, what is your goal?

Vad ska ni åstadkomma, vad är ert mål?

a. Do you have any goals within the team?

Har ni några egna mål/visioner inom ert team?

b. What is required for you to reach your goals?

Vad krävs för att ni ska kunna åstadkomma ert mål?

c. What is required from the teams around you for you to reach your goal?

Vad krävs av teamen runt omkring er för att ni ska kunna nå ert mål?

d. What is your output? What is your final value for your customer?

Vad är er output? Vad har den för slutvärde för kunden?

Practices:

9. What is your working process like in the team?

Hur ser arbetsgången ut inom teamet?

a. How and when do you plan?

Hur och när planerar ni?

b. Tell me about how you work with increments

Berätta om hur ni arbetar med inkrement

- c. How do you perceive that it is going to work with increments? Can you work in a constant pace or do you get interrupted?**

Hur uppfattar du att det går för er att arbeta med inkrement? Kan du arbeta i en konstant takt eller blir du avbruten?

10. How self-organized are you?

Hur självorganiserad är du?

11. What do you contribute to the team?

Vad bidrar du med till teamet?

12. How dependent are you of the other team members?

Hur beroende är du av de andra medlemmarna?

13. How do you communicate within the team?

Hur ser er kommunikation ut inom teamet?

- a. How well informed are you regarding what the other members are doing?**

Hur välinformerad är du gällande vad de andra medlemmarna gör?

- b. Do you discuss failure?**

Diskuterar ni misslyckanden?

14. How would you describe your leadership within the team?

Hur skulle du beskriva ledarskapet inom teamet?

- a. Are their clear leader roles?**

Finns det tydliga ledarroller?

- b. Does anyone give you directives or can you decide more by yourself?**

Ger någon dig direktiv eller kan du bestämma mer fritt?

- c. What is good leadership according to you?**

Vad är bra ledarskap enligt dig?

15. Do you discuss how the team can work better and be more efficient?

Diskuterar ni hur ni kan arbeta bättre inom teamet och bli mer effektiva?

- a. Are you given feedback?**

Får ni feedback på ert arbete?

- b. Have you changed your way of working since you started working in the team to become more efficient?**

Har ert arbetssätt ändrats under tiden som du har arbetat här i försök att bli mer effektiva?

16. Do you have any conflict management?

Hur hanterar ni konflikter?

Behavior:

17. How is the unity within the group?

Hur är sammanhållningen inom ert team?

a. Do you feel affiliation to the team?

Känner du tillhörighet till teamet?

b. Have you had any team building activities?

Har ni haft några team building aktiviteter?

c. Do you discuss the members' strengths and weaknesses and how they complement each other?

Diskuteras medlemmarnas styrkor och svagheter och hur de kompletterar varandra?

d. Do you celebrate success?

Firar ni framgång?

e. Do you have rewards and if so, are they collective?

Har ni belöningar och är de i så fall kollektiva?

18. What motivates you?

Vad motiverar dig?

a. Do you feel motivated with your work at the moment?

Känner du dig motiverad av dina arbetsuppgifter för tillfället?

b. Do you feel personal success when you have performed well in the team?

Känner du personlig success när det går bra för teamet?

19. What decreases your motivation?

Vad gör dig omotiverad?

20. Do you feel stressed or pressured at work?

Känner du dig stressad eller pressad i ditt arbete?

21. Do you perceive that the project leaders have confidence that you can manage your tasks without controlling you?

Har projektledarna förtroende för att ni inom ert team klarar er arbetsuppgift utan styrning?

Problematics and improvement suggestions:

22. What would you say is working well within your team today?

Vad skulle du säga fungerar bra inom ert team idag?

23. What is not working well?

Vad fungerar mindre bra?

- a. What would you say is problematic in your everyday work regarding the way you work in your team?**

Vad tycker du blir problematiskt i ditt vardagliga arbete gällande hur teamet arbetar tillsammans?

- b. Does the way the team looks today obstruct your work?**

Försvåras ditt arbete av hur teamen är uppdelade idag?

- 24. If you could decide how your team would be composed and how they would work together, what would it look like?**

Om du fick bestämma hur ditt team skulle vara sammansatt och arbeta, hur skulle det se ut då?

- 25. Do you have any other improvement suggestions?**

Har du några andra förbättringsförslag?

Interview template other teams at Saab

All the above questions plus some additional ones

- 26. What does your team work with here at Saab?**

Vad arbetar ditt team med här på Saab?

- 27. In what way are do you work differently to other teams at Saab?**

På vilket sätt arbetar ni annorlunda jämfört med andra team på Saab?

Interview template teams outside Saab

All the above questions plus some additional ones

- 28. What company do you work for?**

Vilken företag jobbar du för?

- 29. What are the members positions/roles at the company?**

Vad har medlemmarna för roller/tjänster/positioner på företaget?

- a. Is the team cross-functional?**

Är teamet tvärfunktionellt?

- 30. What is it that makes you high performing? Is it measurables or more that you work well together?**

Vad är det som gör att de är högpresterande? Är det mätbara värden, eller är det att de trivs och arbetar bra tillsammans?

a. How did you become so good?

Hur har ni blivit så bra?

