CHALMERS
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Effective Leadership of Teams in Construction

Master's thesis in the Master's Programme Design and Construction Project Management

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CHALMERS UNIVERSITY OF TECHNOLOGY
Goteborg, Sweden 2018

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ABSTRACT

The construction industry encompasses temporary project teams and leadership on many managerial levels. Team members work closely together and develop primarily during the production phase, where the leaders can create conditions for effective teamwork. Many teams within the construction industry seem to have problems regarding teamwork, and there is a lack of research on managerial team leadership in construction. Therefore, empirical examples about leading teams in production needs to be further investigated. The aim of this study is to investigate how site management may create conditions for effective teams during the production phase. Special attention is paid to the way in which leadership on site accommodates for positive team dynamics. To fulfill the aim, a theoretical framework was designed, based on the team dynamic model of Susan Wheelan. The model has four stages and describes how teams develop and what role, if any, leadership plays. In addition, a qualitative interview study and one field observation were carried out at a large construction company in Sweden. Eleven semi-structured interviews were conducted with foremen, site managers and project managers, all with different backgrounds and experiences. The findings from the study are presented through six principles needed to become an effective team. These are: unity about clear goals and values; a mixed team; clear roles and distribution of responsibilities; support and involvement; personal relationships between members; and understanding team development. In addition, it was found that adaptable leadership and communication are crucial conditions needed in order to achieve these principles.

Key words: Effective teams, site management, team dynamics, construction, production phase

Effektivt ledarskap för team inom byggproduktion
Examensarbete inom masterprogrammet Design and Construction Project Management
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SAMMANFATTNING

Byggindustrin omges av temporära projektteam och ledarskap på flera organisatoriska nivåer. Teammedlemmarna arbetar nära varandra och utvecklas huvudsakligen under produktionsfasen, där ledarna kan skapa förutsättningar för effektivt teamwork. Många team inom byggindustrin verkar ha problem gällande teamwork och det finns inte så mycket forskning om ledarskap i byggproduktion. Därför behöver empiriska exempel om ledarskap i produktion utredas vidare. Syftet med studien är att undersöka hur ledare kan skapa förutsättningar för ett integrerat och framgångsrikt team under produktionsfasen. Extra uppmärksamhet har riktats mot ledarskap på byggarbetsplatsen och hur det bidrar till en positiv gruppdynamik. För att svara på syftet har ett teoretiskt ramverk skapats baserat på en gruppdynamisk modell av Susan Wheelan. Modellen har fyra steg och beskriver hur team utvecklas och hur ledarskap eventuellt ska relateras till det. Utöver det har en kvalitativ intervjustudie och en observation utförts på ett stort byggföretag i Sverige. Elva semistrukturerade intervjuer utfördes med arbetsledare, platschefer och projektchefer med olika bakgrund och erfarenheter. Resultatet från studien har sammanfattats i sex principer som behövs för att uppnå ett effektivt team. Dessa är: enighet om tydliga mål och värderingar, ett mixat team, tydlig roll och ansvarsfördelning, support och involvering, personliga relationer mellan medlemmarna och förståelse för teamets utveckling. Dessutom har det kommit fram att ett anpassningsbart ledarskap och kommunikation är viktiga förutsättningar för att uppnå principerna.

Nyckelord: Effektiva team, platsledning, gruppdynamik, byggindustri, produktion

Contents

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Goteborg, June 2018

Amanda Håkansson & Rebecka Sundberg

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1. Introduction

The construction industry is project-based, which means a dynamic environment consisting of teamwork in temporary teams (Tennant et al., 2011). Even though working in teams is the usual way to work within the construction industry, teamwork does not always function in all projects. This is because there are many factors which influence the effectiveness of a team, such as the project context, leadership, and team members´ different competences and personalities (Wheelan, 2016). In this study, we associate the word *effective* with how team members collaborate and perform as a unit. During the project life cycle teams also develop as a unit because team members work closely together, facing both relational and project challenges. (Wheelan, 2016). Since teams are composed of unique individuals in a complex environment, leading and forming a team is challenging.

Leadership influences team performance, and therefore, leadership needs to be developed to increase the effectiveness and productivity of project teams (Wheelan, 2016). Also, a leader needs the right qualifications, support tools and strategies from the organization in order to manage the team. The leadership role is crucial when creating and maintaining an effective team, and, moreover, leaders play a central role in shaping the team culture (Björklund & Jönsson-Bergström, 2013). However, Wheelan (2016) warns that leaders cannot alone be held responsible for the team's success or failure; there must be interaction between leaders and the team as the team develops through different phases. Wheelan also argues that all members share the responsibility to become an effective team. According to Lefter (2005), each team member is responsible for their own performance, but are affected by the actions of the other members.

A large construction company in Sweden, referred to as Company A, has identified an opportunity for improvement of both its leadership and team effectiveness on production sites through enhancing its managerial leadership. A leadership development program was therefore implemented to develop leaders. This thesis forms a part of that programme and will contribute with empirical examples of managerial leadership. Company A is one of the largest construction companies in Sweden, with about 10 000 employees and a turnover of approximately 30 000 million SEK in 2016 (Sveriges Byggindustrier, 2017). The organizational structure on a national level has a CEO and a management team, where each of these entities are responsible for different regions and support functions. This study is based on interviews with employees in one district in the Goteborg region primarily concerned with building apartment blocks. About 80 people are employed in the district and these contribute to a turnover of 450-600 million SEK each year (internal document from Company A, 2018).

1.1 Aim

The aim of this study is to investigate how site management may create conditions for an effective team during the production phase. Special attention is paid to the way in which leadership on site accommodates for positive team dynamics.

In order to fulfill this aim, a qualitative study has been carried out at a large construction firm, Company A. As support of the aim, the following research questions were formulated:

- What characterizes an effective team?
- What does site management do to create conditions for effective teamwork?

1.2 Limitations

This study is limited to project teams in the production phase of the building process. A team is limited to involve only individuals working in the site-management teams on the production site, and therefore, professional workers, subcontractors or support functions are not included. The study is also limited to managerial-leader roles such as the leadership from the perspective of project managers, site managers and foremen.

2. Theoretical Framework

In this chapter, the theoretical framework is presented. It contains a broad introduction of leadership, and then focus on managerial leadership from a team development perspective. In addition, a model of team development by Susan. A Wheelan (2016) is presented. It explains how teams develop over time and how the leadership should be adjusted to the team.

2.1 A Broad Perspective of Leadership

In its simple definition, leadership is a process of leading, controlling, directing, inspiring and motivating the employees towards the realization of the organizational goals (Clegg et al., 2016). The leader inspires, facilitates and guides people as a coach and a mentor (Ladyshewsky, 2010). There are several characteristics that have been recognized among leaders according to Björklund & Jönsson- Bergström (2013). The most well-known characteristics of leaders are passion, self-perception, energy, clearness, participation, courage, but also team-building. Warrick's (2016) maintains that leaders should be trained in how to build effective teams and develop teamwork. Historically, good leadership was associated with an authoritarian military style, whereas today softer leadership ideas are more popular (Garg & Jain, 2013).

Bolden et al. (2011) discuss disagreements between researchers as to whether the terms *leader* and *manager* are the same thing or not. A difference that some highlight between the two terms is that managers work with stability and consistency, while the leader work with dynamic changes. Managers work with planning, decision making, and organizing others towards goals (Perrin, 2010). Leaders generally have a broader perspective on people, diversity, and society according to Perrin. In most organizations people are employed in management positions but often performing leadership in their daily work, therefore it can be said that manager is the role and leadership is the way management is enacted in an inspiring way (Voigt & Guariglia, 2015). This means that a manager can become a leader when he/she is passionate, supportive, empowering, bringing the best out of the team and builds a creative team with strong relationships and confidence within it. With this said, a person can perform leadership in a team without having an official management role according to Wheelan (2016). In this thesis, no separation between the terms is made.

2.2 Leadership in Construction Organizations

This thesis does not look at leadership from a grand perspective, rather site managerial leadership is studied. The role of a managers does not have clearly defined responsibilities and authorities, instead they are in the middle of a system of relationships (Tengblad & Vie, 2012). The team that surround the managers become highly important since the managers depend on the people in these teams. Due to this dependency, a manager's relationship towards the other managers are one of the most important relationships (Tengblad & Vie, 2012). Managerial behavior in practice is not only about planning and organizing, rather decisions and planning made are often spontaneous problem-solving since the managers need to prioritize between a number of ongoing tasks and problems in their daily practice. This is since the construction industry has a fast rate of changes and prioritizing becomes crucial. The managers spend a lot of time to talk to each other since they collaborate a lot. The relationship between the managers hierarchy in line is therefore characterized by more friendly and informal code of conduct, not a traditional hierarchical line of authority. Instead managers along with the team members require collaborative work in order to achieve common goals and project outcomes (Tengblad & Vie, 2012).

Three managerial roles, hierarchy in line are studied, namely project manager (PM), site manager (SM), and foreman (F). The relationships between the different managerial levels are visualized in Figure 1.

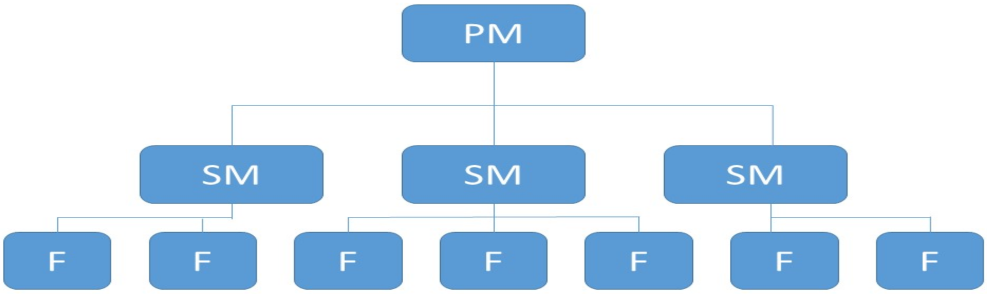

Figure 1: The organizational structure between PM, SM and F.

Project Manager (PM):
The PM has the overall responsibility for organizing and carrying out the project. This includes allocating the right employees in each project, leading, planning and following up activities in order to achieve the project objectives. The PM is responsible for contract related questions, purchase strategies, and large purchases in the project. The PM works with both external relations, as clients and other stakeholders, and internal relations, as manager of the employees in the projects that he/she is responsible for. Usually a PM at Company A is responsible for two to three projects and manage between 10-25 employees. The PM should give employees the right conditions in order for them to deliver good results as well as developing on a personal level (Internal document from Company A, 2018).

Site Manager (SM):
The SM is responsible for carrying out the production phase. This role is viewed as very demanding and important, resulting in a heavy workload, expectations and commitment (Sandberg et al, referred in Sandberg, 2017). The SM spend time planning, leading and following-up in the planning phase and the production phase to reach the project goals (Internal document from Company A, 2018). The SM needs to ensure that the goals regarding quality, work environment and sustainability are fulfilled. Together with the PM, the SM is also responsible for organizing the production process with the right staff and production methods. This leading role also involves developing the employees actively on site. In order to perform their job, the SM needs to have technical competences, engineering know-how, leadership skills and knowledge about human resource management (Styhre, 2012). The SM can be viewed as a middle manager depending on both the PM and the F with different expectations, objectives and agendas (Sandberg, 2017). Further, this leads to an ambiguity between the roles, SMs want to

be independent leaders of a project and at the same time expressing lack of support by their manager.

Foreman (F):
F are responsible for planning, leading and following-up on specific production activities ensuring that goals concerning work environment, quality and sustainability are met. The F is leading and coordinating the professional workers and subcontractors on a daily- and weekly basis (Internal document from Company A, 2018). According to Tengblad and Vie (2012) F have hectic workdays navigating between many different tasks. F cooperate and communicate with many actors both within the company and external ones. And at the same time trying to solve problems that occur at the production site. F spend most of their time taking care of emergent happenings and ensuring that the production process progresses despite the constant disruptions (Tengblad & Vie, 2012).

2.3 Groups and Teams

There is a range of different definitions when referring to the concepts of *group* and *team* according to Rapp-Ricciardi and Schaller (2005). However, many researches seem to agree that a team generates better result than groups and that the members are more qualified. According to Clegg et al. (2016), one definition of a team is "...two or more people psychologically contracted together to achieve a common organizational goal in which all the individuals involved share at least some level of responsibility and accountability for the outcome" (p.91). However, there is a slight difference when referring to groups, which do not require psychological contract between the members. Also, the outcome differs between team and groups where the outcome is less dependent on all the members working together in groups, as well as there is no shared accountability and responsibility for the outcome in this case (Clegg et al, 2016). The connection between group and team can be viewed as a process in which a group becomes a team when goals have been established and methods to accomplish those goals have been found. Different stages of development can describe the process of developing from a group to a team (Wheelan, 2016). To simplify, the term *team* is used in this thesis when talking about the people working together on production sites.

2.3.1 Effective Teams

Wheelan (2016) states that an effective team is where the members feel involved, committed to the tasks and valuable to the organization. Often the members feel that work is fun, which tends to lead to productivity and profitability for the organization. Rapp-Ricciardi (2001) illuminates that the conditions that are needed for a team to become high performing are clear expectations on the team performance and distinct, meaningful tasks to solve. Warrick (2016) argues that it should be characterized what an effective team is in a specific organization. If the picture is clear it becomes easier to strive towards that. Further, Wheelan (2016) recognizes an effective team from an organizational perspective through the following eight principles:

- have a clear mission
- support innovation
- have an attitude that expect success
- put more value into quality and service before making profit

- provide planning and structure to employees
- let the team be self-driven
- set clear expectation
- reward team work rather than individual performance.

Furthermore, in organizations, leaders and all team members have the possibility to work according to these eight principles, striving to foster an effective team (Wheelan, 2016). Communication is needed in order to work with the eight principles. According to Holladay and Coombs (referred in Men, 2014) leadership is performed to a large extent via communication. In the managers daily work, between two-thirds and four-fifths of managers' time is spent in conversing with others (Tengblad & Vie, 2012). The way in which communication is performed in the sense of quality, competence and which channels leaders use have a large impact on the behavior and attitudes among employees (Men, 2014). Moreover, communication can be seen as the face of leadership as stated by Matha and Boehm (2008). They further argue that communication shapes the employees' opinions about the leader's character, abilities and commitment. Effective leaders nowadays strive towards working with soft factors (Garg & Jain, 2013), such as satisfied employees, building relationships with a high level of trust, in which how communication is performed gets a crucial part (Spatz, 1999). Thoms and Fairbank (2008) discus several principles to follow in order to improve managerial communication and choice of appropriate communication channel. They pay attention to interactive communication, such as direct communication, which increases the richness of information exchange. This is a very effective way of communicating (Thoms & Fairbank, 2008). Also, managerial decisions made in spontaneous conversations may be highly effective. In fact, small things such as joking and talking about non-work stuff are considered to be important for maintaining networks in managerial behavior (Tengblad & Vie, 2012). However, the choice of communication channel is dependent on the type of information delivered.

By adhering to Wheelan's (2016) eight principles, organizations can gain many advantageous, such as increased committed employees, unity of purpose, employee job satisfaction, creativity, and loyalty to the organization (Warrick, 2016). By reaching these advantages and exceed expectations of a project such as innovative approaches, a team becomes effective (Chinowsky et al., 2008). Furthermore Chinowsky et al. state that effective teams combine individual knowledge and strengths to exceed the capability of one individual team member.

2.3.2 Team Constellations

According to Rapp-Ricciardi (2001) each project organization is a temporary organization that is put together with individuals that complement each other and together can deliver the specific project. When putting together the optimal team, some researchers claim that the recruited co-workers need to have a special intuition for collaboration (Rapp-Ricciardi & Schaller, 2005). Further, it is also important that social competence is valued as much as technical competences. The members of a team need to feel respect for each other in order to become a cohesive team with ability to reach objectives (Rapp-Ricciardi, 2001). A cross-functional team, meaning a heterogeneous team in which the members have different experience and background, is highly crucial for a successful team. Parallel work is promoted in teamwork rather than sequential work, as would be the case in individual performance. Wheelan (2016) further claims that individual differences are accepted among the rest of the team members as long as the contribution and performance of this member is of help for the tasks. The diversity among individuals is considered to be a contributing factor to becoming a productive and effective team, according to Wheelan (2016). Different skills and knowledge become of complementary advantage in a team. Moreover, the members of an effective team need to be interested in the other members' development and success (Rapp-Ricciardi & Schaller, 2005). From a leader perspective, it is however challenging to manage diverse personalities (Clegg et al., 2016). Different values, behaviors and thinking among members need to be considered and managed in order to make the individual function in the team.

Historically, the focus has been on constructing teams with relevant and required experiences and expertise, rather than focusing on the personalities (Tennant et al., 2011). According to Tennant et al. (2011) the traditional way of putting together teams misses the possible benefits that heterogeneous personalities bring to the team. Rapp-Ricciardi and Schaller (2005) claim that organizations often tend to recruit an individual who matches the standard norms when it comes to a certain kind of personality. This is unfavorable for the team to function since it becomes homogeneous with no complementary skills (Rapp-Ricciardi & Schaller, 2005). Björklund and Jönsson-Bergström (2013) further claim that diversity is an important asset for the performance of the team. The different experiences, perspectives and strengths among the members promote for creativity and a developing environment. It is important to let the members find their right roles and let them seek for tasks which stimulate their need (Rapp-Ricciardi & Schaller, 2005). To compose heterogeneous teams, personality profiling can be helpful (Tennant et al., 2011).

Wheelan (2009) states that team size is linked to productivity and effectiveness of team development. Moreover, according to Wheelan, some researchers argue that a small team is the most favorable option and more effective than a large team. Other researchers point out the opposite. Clegg et al. (2016) argues that team size depends on the complexity and difficulty of a task, whereas a more complex task need a higher range of different competences. Therefore, there are divided thoughts about whether small or large teams are more effective and how it influences productivity in certain situations. Wheelan (2009), however, came up with that an increase in size will lead to a decrease in cohesion and relationship among the members (Steiner, referred in Wheelan, 2009). Also, a larger team tends to be more competitive, more argumentative and less unified since communication tend to be obstructed (Wheelan, 2009). She suggests that teams in project-oriented organizations should be small in the meaning that they have higher chance to develop as a team. Social impact, referring to how individuals interact and closeness in a team, also tend to be higher in small teams since it is easier to communicate and coordinate. The optimal team size is therefore a team of three to seven people (Wheelan, 2016; Clegg et al, 2016).

2.4 The Process of Becoming an Effective Team

Teams are dynamic systems that constantly change, both as a unit and as individuals within the team (Rapp-Ricciardi, 2001). How teams develop over time is called *team dynamics* which is a concept that has been studied the last decades (Wheelan, 2016). Team dynamics include theories about how and why teams form, their structure, challenges, processes and how they operate as a unit (Clegg et al., 2016). When a project team is formed, usually both old and new relations are put together and how the team develop as a unit will affect their performance (Jansson & Ljung, 2011). A well-known model within this research field is the FIRO-model introduced in 1958 by the American psychologist Will Schutz (Schutz, 1992). The model is based on studies he made in the US Navy on what make teams effective. FIRO describes three behavioral stages of team development; *Inclusion, Control*, and *Openness*. The corresponding feelings in these stages are *significance, competence*, and *likability*. The individual gets positive feelings when a behavior is met, and negative feelings if a behavior is not met (Jansson & Ljung, 2011).

More recent research within this field has been done by the Canadian psychologist Susan A. Wheelan. Her four-stages well-known model was developed during the beginning of the 21st century and is the basis for this study (Figure 2). Wheelan (2016) describes the team development process in four stages, named *Dependency and Inclusion, Counterdependency and Fighting, Trust and Structure*, and *Work and Productivity*. The team members act differently depending on which stage of development they are in, they communicate differently, diverse questions are in focus, and the performance varies (Jansson & Ljung, 2011). Wheelan (2016) points out that the awareness among leaders between team members of how teams develop can lead to increased effectiveness. One crucial factor in leadership is that adjustments in leadership style should be done in order to meet the development needs of a team at a particular time. Wheelan (2016) further states that the leader need to adopt to different roles in order for the team to move into more mature stages of development. A leader who does not change leadership style during the developing process will not meet the team's needs nor facilitate for developing an effective team (Wheelan, 2016).

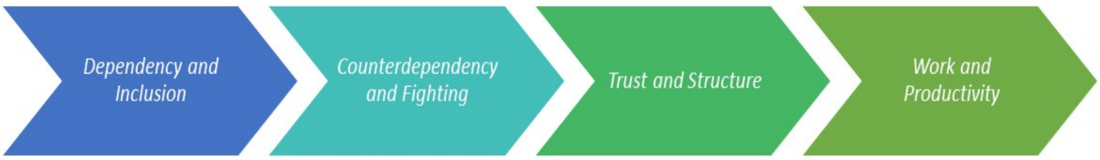

Figure 2: The team development process by Susan A. Wheelan.

Wheelan's stages how a team and leadership develop are introduced below, with connections drawn to the FIRO model.

Stage 1

The first stage, *Dependency and Inclusion*, is recognized in a team where the members are more concerned about safety and what the other members think about them, rather than the actual task (Wheelan, 2016). In this stage, the team is immature and it consists of new constellations of team members. The members fear rejection, are unlikely to express disagreements, the compliance is high, and communication tends to go through the leader instead of between team members. The members see the leader as an important role in this phase because the team show a high dependency of the leader, waiting for the leader to take charge, make decisions, and tell the members what to do. The first stage of Wheelan's model can be connected to the first stage of FIRO, as they both present the first stage of team dynamics (Jansson & Ljung, 2011). As presented in the beginning of this section the first stage of the FIRO-model is related to the behavior of feeling included. The individual wants to feel accepted by and significant for the team and they fear being ignored or forgotten.

In the first stage of Wheelan's (2016) model, the members expect the leader to be a directive and confident leader. Since the team constellations in this stage tend to be immature, and members have not had time to organize themselves (Jansson & Ljung, 2011; Wheelan, 2016), leaders need to take control and be one step ahead of the members to show them the path (Jansson & Ljung, 2011). In this stage is it also crucial to work to reduce anxiety and fears among the members by providing directions and express confidence, but also by providing the members with positive feedback to facilitate team development. Negative feedback tends to increase anxiety and decrease cohesion. Open discussions about goals, tasks, values and leadership are important to move the team into stage two and make the members feel more included. By providing training, education, supervision and task-oriented activities the team tend to feel competent in relation to the goals and tasks, but also learn more about their roles as members and what the leader role means (Jansson & Ljung, 2011). Further, the project goals regarding performance, values and result should be clarified and set as high-performance standards in an early stage. This tend to make the team motivated and more successful (Wheelan, 2016).

Stage 2

Counterdependency and Fighting is the second stage in Wheelan's (2016) model. In this stage of team development, the members tend to free themselves from the dependency of the leader. The members will question the leader and might be suspicious and challenging towards the leader. During this stage conflicts arise between the team members because of disagreements regarding the task, roles, goals and values etc. Through this, the team develop a clearer view of goals and roles, and the member participation increases. Task conflicts are important for trust creation within the team, since trust is created when members feel free and able to disagree with each other. Conflicts are good for the development and if the team can solve their problems they can increase the trust and become a more effective unit.

It is not unusual that problems in teams occur (Rapp-Ricciardi & Schaller, 2005). Often this is overlooked in projects, since it is common to work on the supposition that a fast and flexible project organization often have positive impact on its members, since the responsibility among the members increase. However, it is not unusual that members keep information and knowledge for themselves because they are selfish and believe this strategy is of advantage due to competitive reasons according to Rapp-Ricciardi and Schaller (2005). Another factor which might affect the egoism among members, is the fact that some find teamwork difficult and challenging, especially if the members are used to individual working methods. Therefore, some members do not find collaborative work in teams effective and enjoyable. To leave the individual control behind might be experienced as a loss of personal integrity, hence this have impact on increased conflicts and collaborative problems (Rapp-Ricciardi & Schaller, 2005).

In stage two, the leader should now start to slowly empower the team as the members demand more power and influence (Wheelan, 2016). According to Jansson & Ljung (2011) some teams tend to stay in this stage of conflict while other more easily move on. To avoid getting stuck, Wheelan (2016) discuss two actions to be taken into account.

Firstly, leaders should not personalize an individual's thoughts since the member tend to feel personally attacked. Members then tend to be defensive and reduce teams conflict resolving. The leader should adopt a team perspective instead to solve conflicts. By having this team perspective, the leader should interpret the individuals and move the team further in the team development process. Secondly, the leader should act in a way that facilitates open discussion among the members, and resolution regarding conflicts, values, goals and leadership. By being more open with conflict, trust and cohesion will increase among the members, hence take the team further in the development (Wheelan, 2016). The leader should also allocate work tasks among the team members and thereby affect the role distribution (Jansson & Ljung, 2011).

Stage 3

The third stage of Wheelan's (2016) model is called *Trust and Structure*. If the team has worked their way through the second stage, the trust, willingness to cooperate, and commitment to the team increases in this stage. Members communicate openly and task oriented instead of focusing on power and influence which impregnate the earlier stages. The members create positive working relationships with each other and the leader has a less directive role since the team has become more self-driven. Characteristics of a team in this stage is goal clarity, adjustments of roles and tasks to increase the possibility of goal achievement, and conflicts are handled in an effective way. Earlier in the team development process sub-groups may form within the team since some of the team members has created stronger relationships to each other and worked more closely (Wheelan, 2016). In this stage members have accepted that sub-groups can increase the effectivity of the team by solving sub-tasks instead of seeing sub-groups as a threat to the team as a unit (Jansson & Ljung, 2011). The third stage together with the second is comparable to the second stage of the FIRO model, about having control (Jansson & Ljung, 2011). The individual behavior is about feeling competent in the team. The individual fear being humiliated or seen as incompetent.

When conflicts, goals, values and leadership have been discussed and thereby clearer and accepted among the members, leadership in stage three involve the members to participate in the leadership (Wheelan, 2016). Roles and tasks become clearer and leader prominence is less important at this stage. Leadership still has to be present for coordination, but it is coordinated among the members. At this point it is important to encourage and support the members as they are more involved in decision making, and other tasks that the leader possessed in early stages. Thereby the members feel competent and involved. Furthermore, it is important to facilitate for team productivity by encouraging the team to develop new changes in the team structure.

Stage 4

Work and Productivity is the fourth, and last, stage in this team development model (Wheelan, 2016). Teams that enter this stage have become effective, delivering productive and effective team work. The team members have solved issues during the earlier stages and in this stage, they can focus on fulfilling the tasks and reaching the goals. All members are clear and agree with the team goals and their role match their abilities. The team has effective strategies regarding conflict management and they promote innovation. When a team enter the last stage of team development, individuals seek to feel genuinely liked by the team members according to the FIRO model (Jansson & Ljung, 2011). Therefore, it is common that the team creates opportunities where they laugh together and acknowledge each other.

In stage four, the leader can relax a bit since members have taken certain responsibility and accountability in the team. The leader tends to act more as a consultant and support the team when needed (Jansson & Ljung, 2011). The main role as a leader is to continue to monitor for productiveness and support the effective team. Sub-groups have developed earlier and the leader need to find solutions to avoid imbalance between sub-groups. The challenge here is to integrate new employees, as new members enter the team and old leave the team (Wheelan, 2016). Leaders and members can address challenges related to changes in team constellation by continuously identifying disruptions and make adjustments. Team members can also affect the speed of the team developing process by welcoming new members with a lot of attention so that they feel meaningful and important from the beginning. They also have the responsibility to lift up and encourage their colleagues' competences (Jansson & Ljung, 2011).

2.4.1 Complexity of Team Development in Construction Projects

A new team constellation does not become an effective team the first day (Sheard & Kakabadse, 2002) and many teams in organizations never become effective teams, instead they get stuck in an early stage of team development (Wheelan, 2016; Jansson & Ljung, 2011). Wheelan mentions that up to 90% of teams in organizations have difficulties regarding performance. To understand the complexity of team development, Homan (referred in Raes et al., 2015) argues that Wheelan's model simplifies the team development process, giving the idea that it would be a process following the same fixed stages in all teams. He points out that the team dynamic process is both chaotic, complex and unpredictable. According to Rapp-Ricciardi (2001) many researchers argue that teams go through periodic challenges repetitive times rather than passing through a stage one time. This criticism to Wheelan's four stage model is important to have in mind when using it (Raes et al., 2015) and Wheelan acknowledge that her model is a simplified way of visualizing the team dynamic process (Wheelan, referred Raes et al., 2015).

If a team develops into an effective team it needs to continue to learn in order to stay effective (Raes et al., 2015). If a project ends and the project team has become effective, a strategy can be to keep the same team of individuals from one project to another (Jansson & Ljung, 2011). As long as the projects are similar and require the same competences, this will minimize the energy which is required in team dynamics and to get to know each other. This energy can instead be focused on solving the tasks and achieving the project goals.

There is always an uncertainty in projects since the different activities of the production process is not always predetermined (Jansson & Ljung, 2011). Some competences will not be used in a larger extent for example, which might lead to that individuals question their importance and their competences in the project. Also, previous experience, knowledge and different personalities of the team members might affect the project in different directions, which reinforces the importance of working as a team in project and not let one individual alone influence and affect the project. The external demand on a project, such as fast, short-term decisions, affect the team development in construction projects of natural reasons (Jansson & Ljung, 2011). According to Rapp-Ricciardi (2001) the team development process and the project life cycle influence each other mutually. He argues that teams that have matured and developed to the later phases of the team development process have better possibilities when facing uncertainty, stress or challenging phases of the project. Likewise, an immature team will not have the same ability to perform in these situations. By taking this into consideration Rapp-Ricciardi (2001) stresses the possibility to increase the stability in projects by addressing the team dynamics.

As a construction project is a dynamic process with a project team that also develops over time, situational leadership can be a suitable approach (Senaratne & Samaraweera, 2015). Situational leadership means that a leader should be able to adjust leadership style according to contextual circumstances (Cutler, 2014). This approach states that there is not one perfect leadership style that is applicable at all times, the leader needs to be flexible. Situational leadership can be related to the team dynamic process, where the team's ability and attitude to solve tasks varies during the development phases (Jansson & Ljung, 2011). And as presented in section 2.4 in Wheelan's (2016) model, the role of the leader varies in the different stages. According to Jansson and Ljung (2011) it is challenging to be a flexible leader, understanding what the team needs. Many leaders have a leadership style that they favor and use in most situations. At the same time, the team members can require different kind of leadership since team members may belong to different stages.

Another perspective of how to adjust the leadership is presented by Walker (referred in Senaratne & Samaraweera, 2015) who claims that a leader in construction projects should obtain two different kind of leadership styles during the project process. In early stages, the leader should obtain a more people-oriented leadership role which enable the leader to meet the timid team, this is furthermore reinforced in early stages of Wheelan's (2016) model. In later stages, the leader should adopt a more task-oriented leadership style in order to achieve the tasks and goals set together with the team (Walker, 1996, referred in Senaratne & Samaraweera, 2015). However, according to Garg and Jain (2013) a leader should be both task oriented and people oriented. That means that the leader can set up goals and deliver results and at the same time care for the people involved in the project. In order to become high performing they argue that task-orientation is the most important aspect in combination with some people-orientation

3. Research Design and Methods

In order to undertake a research project, the planning of the research design is important (Blaike, 2010). This study is exploratory aimed at understanding process and problems (Duignan, 2016). The research is done in an iterative way (Figure 3), meaning that literature and empirical data are gathered alternately, and by going back and forth between these data-gatherings, in order to more easily connect and compare these.

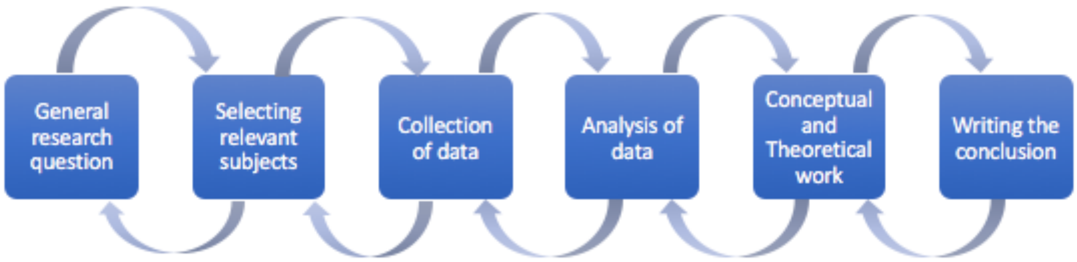

Figure 3: The six steps in research design.

To describe the overall process of carrying out research, Bryman and Bell's (2015) steps are followed: *define research question, select relevant subject and site, collection of data, interpretation of data, conceptual and theoretical work, writing discussion and conclusion.* These steps follow a clear process. The interpretation of these steps is described in this section and visualized in Figure 3. Selecting the topic to study was done through discussions with a district manager and a PM at Company A where issues regarding leadership and team dynamic were highlighted. Referring to the first step in Figure 3, the general purpose of the research was specified and two research questions were formulated to guide the research. During the process, the research questions have been modified and reformulated based on new interpretations from the data collected. The second step in the process was to define the subject, i.e. to focus on leaders within the production at Company A. After that the iterative collection of data begun, both through literature and empirical investigations (the process is described further in section 3.1 and 3.2). The collected data were analyzed and connections were drawn between theory and practice in order to come up with recommendations for Company A. Further, during the process checks meetings and discussions have been carried out with the supervisor at Company A. How the data was analyzed is described in chapter 3.1. The last step of the process was to conclude and write the findings of the thesis (chapter 4).

This thesis is based on qualitative research, which can be summarized by the following three bullet points (Kvale, 2008):

- experiences of teams or individuals, either everyday situations or professional.
- interactions and communication in action.
- documents such as movies, images, music or similar experiences.

Qualitative research consists of a variety of methods. This thesis was based on internal documents, interviews and observations, which are three ways to collect information. In addition to these methods the researchers have been at Company A's office on a daily basis for five months, being part of the company culture and conversing with many employees.

This research approach was chosen because it was believed to lead to answering the formulated research questions. The study is limited to a local geographical district, and sought to find empirical examples and linkages rather than a generalized, abstract understanding. By implementing qualitative research, the data collection aims to allow interviewees to voice their point of view on a specific subject or activity (Bryman & Bell, 2015). This provides informative data and contextual understanding from a local perspective.

Common criticism of qualitative research is that it relies on researchers' interpretations of what is important and significant to study, and often on personal relations established between researchers and people studied (Bryman & Bell, 2015). In our context, one of the us is taking part in a trainee program at Company A, and has been working at the company for six months, which means she may have created personal relationships with some of the interviewees. The other researcher is, however, new to the company, i.e. an outsider. She can therefore question readily arrived at interpretations and ask follow-up questions during the interviews. According to Bryman and Bell (2015) normally readers do not get information on why specific interviewees were chosen and others not; here, to increase the transparency, the selection of interviewees is described in section 3.1.

3.1 Interviews

It is advantageous to perform interviews, since it becomes easier to get a better feel for the person in a face-to-face meeting rather than over the phone. The expectation was to understand their experiences, feelings and hopes (Kvale, 2008). Knowledge was constructed when the interviewer and interviewee interacted with each other. To form the interviews according to the aim of this thesis, the interviews were conducted in a semi-structured way. This is a suitable option in order to come close to everyday conversation. However, semi-structured interviews are neither open everyday conversation nor closed questionnaires (Kvale, 2008). Lantz (1993) states that a semi-structured interview can be recognized by the following:

- Models for concepts and relation between concepts constitute the starting point in a semi-structured interview.
- The questions concern the individual experiences of quantities and qualities which the interviewer has defined.
- The context is formally decided
- The questions are asked in a certain order with follow-up questions. There is a combination of open and structured answers.

When constructing interviews there are several steps to undergo in order to process the material (Kvale, 2008). The seven steps by Kvale (1996) were taken into consideration when doing the semi-structured interviews. The steps are *thematizing, designing, interviewing, transcribing, analyzing*, *verifying* and *reporting*. These have been used as inspiration on how interview research is performed and helped guide us in the process from the initial idea to a final report.

Thematizing
Firstly, the purpose of the interviews was defined in line with the general research questions in accordance with Kvale (1996). The interviews aimed to provide information and personal experiences of the interviewees daily work as leaders at Company A.

Designing
The second step was to design and plan how to perform the interviews (Kvale, 1996). The focus was to design the research so that useful data and knowledge were obtained, taking the ethical aspects into account. An interview guide was constructed focusing on four areas: background of the interviewee, leadership, communication, and teams. The interview guide was semi-structured with 17 questions and follow-up questions. This number of questions were considered suitable due to time. In this study, the way of selecting interviewees was *purposive sampling*. Purposive sampling aims to find suitable people to study that vary from each other and are relevant to the research questions in order to get a wide understanding (Bryman & Bell, 2015). The selection of interviewees was made with help from our supervisor at Company A. The basis for the selection was to interview a collection of employees' representative of the district when it comes to variation in gender, education, work-life experience, ethnic background, age (20-45 years old), who active in different project teams. The interviewees were distributed on four different project teams at Company A. In general, the teams were mixed regarding the named factors. However, one team contained of only male employees and another team of a majority of employees below 30 years old.

Interviewing
Interviews were performed face-to-face as planned with eleven employees in leading roles; namely three PMs, four SMs, and four Fs. Most of the interviews were conducted at Company A's office, while three of them were conducted at different site offices since these interviewees could not leave their sites. The office was chosen in order to avoid being disrupted, which can be more commonly on sites. The interviews were held between 50 to 90 minutes long. The interviews were recorded and some summarizing and reflective notes were made during the them.

Transcribing
All interviews were transcribed in order to prepare the oral interview material for analysis in accordance with Kvale (1996). The transcribing was done successively as the interviews were performed. By doing so, we evaluated the answers and were able to amend or add questions as we went along (Kvale, 1996).

Analyzing
Methods for analyzing the data were selected based on the aim of the study and the nature of the conducted material in accordance with Kvale (1996). After each interview, the impressions were discussed and summarized by the two researchers. After finishing all interviews, the transcribed material, notes and impressions from the study were read through to define interesting points. Five broad themes were chosen and used as keywords on a whiteboard (team formation, team development, collaboration, roles, effective team) and the material were sorted into these themes using color coding. Parallels were drawn between points that different interviewees had made and similarities and differences between them were noticed. After drawing the parallels and

processing the material new themes were established and they became sections in the findings- and discussion chapter.

Verifying
Reliability is an important criterion when evaluating the quality of the research (Bryman & Bell, 2015). In qualitative research, such as interview studies, the relevance of these have been questioned by many researchers because of the difficulty in understanding the meaning of the terms. For example, external reliability is about the possibility for an external researcher to replicate the study. This is challenging because each social setting is unique, the selection of interviewees affects the data, and the structure of the data collection is semi-structured which means that it is not possible to replicate in an exact way. In qualitative research, therefore, replicability is not possible.

External validity can be problematic in qualitative social research. Findings from small case studies cannot be generalized to a bigger context (Bryman & Bell, 2015). In this research, the selected interviewees are not meant to be representative for the whole organization of Company A, rather give insight and empirical examples from individuals within the organization. The findings can be generalized to the theoretical framework, and this is the basis for measuring generalization on a qualitative study.

Reporting
The findings from the analysis were communicated through this report. Some citations from the interviews were used to exemplify the interviewees' experiences.

3.2 Observation

By conducting observations, it is possible to get a better understanding of behaviors among people in a certain context and it can be a good complement to other empirical data collected (Bryman & Bell, 2015; Blaikie, 2010). In order to better understand and analyze the interviews, a production start-up workshop (described in chapter 4.1) was observed in the beginning of one of Company A's projects. The observed production start-up workshop was four hours. The observation was not structured, meaning that no observation schedule of the participants behavior was recorded. Field notes were taken of activities, roles and behaviors. The focus was on seeing what a team start-up workshop is and what kinds of values and goals would be in focus in this specific team. In addition, we observed how the employees interacted, in the team, how the discussions flowed, and how disagreements were handled. By doing this, the behaviors and the situational context can be compared and complemented to the interviews. According to Bryman and Bell (2015) the best option to collect data from an observation is to be a (silent) participant. By being a participant observer in this start-up workshop it is easier to get a better feeling of the environment.

Production start-up workshops are organized in the beginning of the production phase with the aim to formulate goals and values specific for the project. During a production start-up workshop, the project core team discuss project goals, values, and expectations. Not all future project members do participate in this workshop, only the site management that works in the early phase of production attend. During the observed workshop nine employees attended.

3.4 Code of Ethics

When performing interviews and observations there is a risk that a certain question can be disturbing to an individual. The *Codes of ethics* by Blaikie (2010) are therefore the basis for ethics of this thesis:

- *Voluntary participation:* Research participants cannot be required to be involved and if they agree to they must know that they have the right to withdraw at any time (Blaikie, 2010). All interviewees are asked for their consent to participate, to be taped during the interview, and to be quoted in the thesis.
- *Obtaining informed consent of research participants:* The participants should be informed of the nature and purpose of the research, the methods that will be used, what are required from the participants and how the result will be used (Blaikie, 2010). The interviewees in this study were informed of these and they were also welcomed to contact the researchers after the interviews if they had further thoughts or questions.
- *Protecting the interest of the research participants:* The participants' interest must be protected by ensuring anonymity is preserved and confidentially of the data guaranteed (Blaikie, 2010) and therefore both the interviewees and the company is anonymous in this study.
- *Researching with integrity:* The researcher must ensure that the research is conducted according to acceptable standards of practice and without fraud, deception or dishonesty (Blaikie, 2010).

4. Findings

In this chapter, the empirical findings are presented. Section 4.1 describes the production start-up workshop, while 4.2-4.7 report on the analysis of the interview transcripts. The interviewees are identified by their roles and a number, such as PM1-PM3, SM1-SM4, and F1-F4.

4.1 Production Start-up Workshop

An operational manager acted chairperson and started the workshop with a personal introduction to the team. The team members were invited to one by one share their own expectations on the project. Some of the expectations that were mentioned were: keeping time, be engaged, see each other, work safely, no stress, challenges in building technology, use new technology, laugh a lot, help each other, and a challenge with gathering many employees on the same site office.

During the next part of the workshop, the team was divided into two groups of five or six members each. In these smaller groups, the individuals were asked to pick out four sentences from a pack of cards that they thought described their desired project culture in a good way. The sentences were from Company A's values and Code of Conduct, including how Company A should work with safety, sustainability, customers, and ethics etc. After selecting four sentences, the each group had 30 minutes to collectively decide on which four sentences were most important to the group as a whole. In both of the observed groups the discussion was active and each individual tried to argue for their own sentences. After a 30-minute-long discussion in each group, they then came up with the following sentences:

- We care about the people and the environment
- We foster a working environment where everyone gets a say
- We foster a working culture where all people feel trust and respect for each other
- We strive to understand the needs of our customers and their customers

It is interesting to observe that, in this case both teams had chosen the same sentences, but they had different reasoning, which led to new discussions in the whole team. From this discussion, the operational manager started to formulate project-specific values that should reflect the project:

- Everyone should feel well and safe after a working day (and career).
- We are curious and care for each other.
- Be happy -it is spreading.
- See possibilities -you cannot whine to get a better working environment.
- Help each other not to talk badly about others.
- Give feedback and talk about things that feels wrong in order to improve.
- We are a project that people wants to visit.
- We are interested in the client's challenges in order to outperform them.

At the end of this workshop the team members signed a document with the agreed project-specific values. The team said that it is very important that the whole team agreed with the signed goals and values and followed them during the production.

Further, it was highlighted that early decisions about goals and values that would form a structure for how the team members should act within the project. The values should not be something that are only on the organizational agenda.

4.2 Goals and Values within the Project

All interviewees agreed that goals and values which have been discussed during the production start-up workshop need to be anchored in the team. Everybody should understand the project goals and values and strive to reach them in their daily work, for example, to achieve profit and be role models when it comes to the values on site (SM4). In order to anchor the goals and values, communication between the team members is something that all interviewees thought was important, striving towards the objectives, and deliver a successful project. However, it is a big challenge for leadership and it is difficult to make everyone understand everything you want to say and to make all employees engage in the project goals (F3, SM3). Therefore, it is crucial to discuss the goals and values and remind each other about them during the production. One way to communicate the goals and values effectively is to use visualization, such as documents in large print and illustrations on screens, according to two interviews (F2, SM3). The values can also be discussed at meetings during the production phase, according to PM1. According to SM1 values should be discussed on a daily basis. This is not something that all interviewees actively work with, some of them only have a printed copy of the values in their office, which is seldom paid attention to (SM2, F2, SM4). PM3 highlights that operations and team specific values should also be updated during the production, for example when new members enter.

Many of the interviewees thought that planning and clear communication play important roles when leading a team towards the objectives (PM1, SM4, SM2). To have the right conditions to create an effective team with an enjoyable environment, the leader needs to plan and control proactively both directed to the individual and the team (SM4, F3, SM2). By following the articulated team-specific values, a site office can be more than about the actual work, a socially enjoyable environment where the employees feel that they have another purpose beyond budget, quality and time (SM4). Moreover, two of the respondents stressed that this leads to a prestigeless climate where the team members help each other and the leader is seen as one of the team members (F2, SM2).

4.3 Team Formation

At Company A the formation of project teams is generally done by the PM in collaboration with the district manager (the manager above the PM) and the SM. During the tendering phase, the PM and district manager decide on key roles, for example which SM should be responsible for the production phase. In this early phase, the PM and district manager have ideas about employees that might become part of the project, but these roles are not established yet. A PM pointed out project teams are constructed based on availability, competence and personality. Further a PM is aware that this is mostly based on the PM's personal view of the individual's personality, not on data from personality tests that all employees have done during their time at the company. The PM can put together the core team using this approach but strategically they need to integrate new employees and complement these with more resources during the production phase. As challenges related to forming new teams, a PM mentioned that project teams are becoming more heterogeneous, compared to historically when project teams only consisted of fairly homogeneous Swedish men. In order to form a functioning, team a PM addressed the importance of getting the SM on board and letting the SM to be part of the selection of team members. Therefore, they decide about the definitive roles together with the SM in beforehand of production start (personal communication with PM2, February 12th, 2018).

According to all interviewees, diversity is important among the project team members regarding competences and experiences, such as a diversity in practical and theoretical skills. SM2 exemplified that when choosing Fs for a project team, these should complement each other regarding competences, such as a new employee should be joint with an experienced employee, previously a professional worker, to contribute with a range of experiences. In an effective team, all members should feel that all competences are used to their fullest potential. One example about forming teams was given by F4:

> *A mixture is fun. Different experiences, different background. That is fun. I don't think that I would have liked to choose because if you choose, you choose people that you are comfortable with, but if you let the chance decide you will develop as a person. Because then you will build up a team with people you have not chosen and you need to learn how to collaborate and get to know each other.*

One of the Fs highlighted that it is easier to collaborate with homogenous personalities since people tend to think alike (F1). However, the rest of the interviewees believed that different personalities are needed in order to make a team function, such as complementing each other in being either more analytical or being a rapid problem-solver and decision-maker (SM4, F2). Moreover, F1 reflected upon the necessity of having a heterogeneous team with a variety of personalities. Further, this person thought that if a team is composed of only fast decision-makers, an additional team member needs to be added who is more reflective and critical. F1 said:

> *You can identify that we do not have anyone who think twice. How can we add such a person? Do we have someone on the district with this personality? Or perhaps can we have this aspect in mind?*

Another example regarding different personalities was reported by SM4, who had developed an understanding of colleagues' differences in relation to the SM's own personality. The colleagues needed more time to make decisions whereas the SM was uncomfortable with the silence that occurred while they were thinking the problem through. Instead of waiting for inputs, the SM used to make the decisions for them. He realized that he needed to modify leadership style because the rest of the team's opinions are valuable.

Many of the interviewees mentioned that it is favorable with a team consisting of both male and female employees. This was reflected in F3 comment the men and women tend to communicate differently, which is good for the project (F3). This because women approach problems differently and focus on solving them. SM1 and SM2 believed that a mixture between genders create a better environment in the office. At the same time, it is not desirable to only focus on creating a project team with 50/50 men and women. Instead a team should be formed first and foremost based on the individuals′ experience, competences, and personalities (PM3).

SM2 argued that it is crucial with diversity regarding age in order to create an effective team. There is a challenge in generational belonging, such as adapting to innovation, new technology and other changes (SM4, PM3). To highlight this, PM3 stated the following: *"It should be a good mixture. Experience is always valuable but at the same time youthly enthusiasm and questioning is always appreciated"*. As noticed from many of the interviews, many highlighted that the F and the SM should complement each other regarding age. Often one of them is young and computer-skilled while the other one is older with more experience in construction (SM1).

PM1 stated that *"leadership is about adapting to each individual, so that the individual can perform in a way that the team become as effective as possible."* SM2 reflected upon how to adopt leadership depending on the individual's gender, personality, competence area and background. Further, PM2 mentioned that:

> *I cannot work according to a template. I cannot enter a mode that I am always in because that would not fit anyone properly. Everyone would look at me as if they do not understand what I am saying.*

Many employees working in the production phase have to be able to adapt to different project environments (PM1) otherwise it would not be possible to collaborate across the many professional categories included in construction projects. However, the challenge is to gather all these different individuals and make them enjoy working together (SM4, PM1). According to SM1 it helps if the employees have a positive attitude. PM1 talks to the team members about their different qualities within the team in order to make them aware of their similarities and differences and be able to understand each other better. This is done through interpersonal communication at meetings talking about what employees can learn from each other. The effect has been better collaboration. PMs saw the possibility in taking advantage of heterogeneous individuals when composing teams. For example, PM1 mentioned an old and experienced F that wanted to teach younger colleagues. When the PM realized this, a reorganization was done in order to find a suitable team composition where the employee could use the full potential and therefore be more motivated.

4.4 Role and Responsibility

It was mentioned that it is crucial with clear role and responsibility distribution, where all team members know what is expected of them and each other (F2, PM1). Even though everyone has their own area of responsibility, the team members should be aware what their colleagues are responsible for and have a project overview (SM2). It creates a more open environment in the team and facilitates for collaborative work (PM3). SM3 also stated that a small team can work more collaborative in all production activities compared to bigger teams where the responsibilities need to be distributed to a larger extent. It can also become diffuse in bigger teams who is responsible for what according to one F3. However, planning for clear roles and responsibilities is believed to lead to increased well-being among the employees (SM3). To increase the motivation and well-being among the employees, one example is that the tasks should be distributed among the employees in a fair way to avoid that one of them end up with only boring tasks (SM3).

The interviewees have highlighted some expectations on each other's roles. Commonly the different roles have emphasized that clarity in responsibility distribution, planning and providing the 'right' conditions are important. Despite this, the F and SMs agreed that PMs should staff projects with the right number of employees and clarify the expectations of the Fs and SMs. Subsequently PM2 stressed that the SMs are responsible for integrating new employees and allocating responsibility to the team members (PM2). It was well agreed that the SMs should have an overview of the Fs' areas of responsibilities and what is happening within the project over the whole production time (F1). They should plan proactively, involving and informing the Fs continuously.

The SMs often want to be self-driven and responsible for the production phase. Thus, PM1 expressed that SMs should not need to be controlled by the PMs. However, if problems occur SMs are expected to discuss these with their PMs. Likewise, the SMs expect the Fs to bring up problems or critical activities to them. PM1 thought that it is important to not take on the leader position at the level below; it is important to delegate, trust and support subordinate managers to do their allocated tasks. This also implies that a SM should not take on the F's leadership role by trying to control details (SM3). PM2 reflected that it is a trap to fall back to a leader positions previously held. For example, this PM explained that what is expected of the SM is the same responsibility and behavior as the PM had when working as a SM.

PM1 emphasized the importance of letting employees think for themselves and take responsibility, and in this way develop a climate of independence, for example, by asking questions which lead the employees to reflect upon what has to be done instead of just instructing them. It is all about communicating and coaching. Another example is trying to make the employee understand *why* a task should be done instead of delegating *what* should be done or *that* it should be done (F1). Instead of instructing the employees in a meeting what should be done, PM2 want the employees to make an executive plan and then present their ideas:

> *I always try to make my employees do things and then present to me rather than the opposite. I think that it creates involvement and engagement, that they do it themselves. They can a bit proud of it when I appreciate their work.*

Another example of developing effective teams is for the leader to allocate responsibility to different team members to hold meetings (SM2, PM3). PM3 thought that giving more responsibility than the employees think that they can handle will enable them to grow as individuals and develop new competences. It is crucial to learn-by-doing as stated by one of the SMs. Further, the leader should not rebuke when it is not necessary because the employees need to learn from small mistakes. SM3 meant that when allocating responsibility to other employees there needs to be clearness and a well structure plan for this.

4.5 Support and Involvement

Many of the leaders value inclusiveness in a team since effective performance on site is about teamwork (SM2, PM3). PM1 reflected about involvement and said, *"I believe that people are the key to project success"*. PM1 further said that if the employees do not enjoy their jobs or do not have the appropriate support at work they will not be productive. Further, two of the Fs argued that it is important that team members are caring and supportive of each other (F3, F2). F2 stated that the team members should show interest in each other and help out when possible. This support can be both on a personal level, caring if someone feel bad, and on a work level, giving feedback to help develop competences. F3 expressed that it is important to feel needed and supported, and further gave the example: *"The SM should try to express in front of the team that I support this person's decisions no matter what"*.

Two of the interviewees believed that feedback, positive and constructive, should be delivered spontaneously and preferably as often as possible (SM4, F1), for example, asking a colleague how a task went and giving feedback on it. Many of the leaders believed that feedback and de-briefs should be done in private as well as in meetings with the whole team. For example, at the end of meetings each employee has the opportunity to explain how they felt about a work task and how they feel in general (SM2). This enables changes to be made in the workload and responsibility if needed. Arranged check meetings between the PM and SM are requested from SM. PM2 emphasized that a conversation between two persons is more effective compared to informing in large meetings. One example of how one leader gave feedback is to have short meetings giving feedback to one employee at a time. The focus in the meeting is to strengthen the employee with positive feedback. The relation between positive and negative feedback must be balanced otherwise the employee will only remember the negative feedback from the meeting. It is possible to change someone's bad behavior through positively reinforcing appreciated behaviors according to PM2.

For SMs and Fs it is important that the PM sees them and gives them feedback, and supports them (F3, SM2). Both the SMs and the Fs understood that a PM cannot be present on the production site every day, but they expected to get support when needed. PM3 emphasized that the F and SM should request support when they need it. The PM should coach and guide the employees. One example in creating a supportive environment is expressed by PM2:

> *You cannot make people follow you if you force or threaten them. It is accomplished by giving them the right conditions to feel safe and be allowed to fail and to succeed. They should feel safe in the environment that they work in and understand that they have support from their manager. So, I work a lot to create such an environment, where these feelings are achieved.*

It is not just about giving feedback and support, also how it is delivered is crucial for how it is received. PM3 stressed that people are different, for example if the receiver is introvert or extrovert, feedback should be delivered differently, either more emotion-oriented or task-oriented. It is also mentioned that it is important to be open to receive feedback and see the possibility to improve instead of criticism (F4).

Many interviewees stressed that it is important to include the team members in order to find the most effective solution (F3, F2). It is difficult to get all members' opinions since everyone is different, and some do not like to express their opinions (PM1). The interviewees have different strategies to make the employees share their point of view. One example is structuring the meeting so that everyone gets to talk about their area of responsibility (F2). Another example is to ask direct questions to each team member spontaneously; this is believed to create a relaxed meeting environment (SM2). A third example is to divide the team into smaller teams, for example teams of two, letting them discuss a few questions first. These smaller units can then be combined with another two colleagues to discuss further and after that discuss it with the whole team (PM3). F1 agreed with the importance of taking many opinions into consideration but stressed the challenge with it in stressful situations:

> *Sometimes I experience that I actually have time to listen to each proposal and have time to think them through before taking a decision. While in other situations you need to make a fast decision in order to make progress.*

Another challenge is if one team member has very strong opinions. PM3 thought that it is important to listen and take this person's opinions into account otherwise there is a risk that this person becomes an informal leader and that the team becomes disunited (PM3). The leader needs to make sure that this person understands that it is important to make decisions based on the common opinion within the team (PM3).

Many of the interviewees mentioned that by involving the employees in designing their way of working and contributing in making decisions promotes increased engagement among them, for example, letting the SMs be part of discussions that usually take place on a higher organizational level. If the employees are able to to influence their ways of working instead of being carefully monitored and controlled, then a learning environment is promoted (PM2). The employees become keener to develop their way of work and competences since they were a part in forming them in the first place. One example which PM3 mentioned to create involvement and cohesiveness is to implement the leader's ideas among the team members:

> *…if there is a way that you know functions well, the trick is to implement it in the team so that the team thinks the same… But at the same time, it should feel like the team came up with the solution together and that there is a good feeling about it. There is a lot about psychology behind leadership, it is about not to use it in the wrong way and manipulating people. It is about how to angle questions and communicate to gain certain effects.*

Another example of involving the individual is to ask questions about the employee's area of responsibility in order to give the employee a possibility to teach the leader. By using this technique, PM1 has recognized that the employee is keener on asking questions and engage in the project, since that was a previous issue.

PM2 reflected upon that inclusion and increased contribution can lead to a higher motivation among the team members. It is crucial as a leader to understand what a team is motivated of (SM4). From a F perspective, increased participation of the PM is appreciated since they feel important and valued when the PM visits the site. Another strategy to motivate the employees is to compliment where it is deserved (PM1). PM1 stressed that all people need to be appreciated for what they do. Further the same PM thought that flatter should be given as often as possible, this is something that SM2 agreed on. However, during the interviews it was mentioned that motivation is not something that all teams talk about; F4 thought that this is something that should be more frequently discussed since everyone is motivated by different things.

4.6 Relationships within the Team

Many of the interviewees stressed the importance of first getting to know the team members and what they desire and then shift focus to the execution (F3). The right leadership style is developed when the personal chemistry between people emerges (SM4). Some of the interviewees expressed that their leadership mirrors the team and that the team adapts to the leader's behavior, or vice versa (PM3). Also, leadership is about being a role model for the employees, according to SM2. This was strengthened by F4 who said that it is favorable to have close relationships to the leaders above since this facilitates learning from people that you look up to. Additionally, two interviewees said that they gained experience and inspiration from previous colleagues, managers and mentors, developing their leadership style from them (SM2, PM2).

SM2 emphasized that some SMs lack understanding of how favorable it is to get to know their site employees on a personal level. PM2 moreover explained that there is a difference between *private* and *personal*. A relationship can still be personal without being too private. SM3 expressed that:

> *Here we have been very open with each other. There can be private things which disrupt, and then it can be very good to talk about them since it may affect your behavior at work and how much you can perform.*

Relationships can be formed by organizing social activities in and outside office to create a good team dynamics. For example, to have breakfast together in the office and organizing after-works activities. However, SM3 mentioned that it takes different amounts of time to get to know different colleagues. One exercise to get to know the team was mentioned by PM2. The exercise is that all team members get to talk about their life experiences, mentioning both work and personal experiences. Sometimes the employees share deeper personal information about themselves. This exercise has created a better cohesion and respect for each other as individuals (PM2).

By working closely together, employees develop together, find effective collaboration, and communication becomes more hands-on (F2). Therefore, two of the interviewees emphasized that project teams that have become effective should be maintained in future projects (F2, SM2). To the contrary, PM1 stated that it is not favorable to work with the same colleagues too closely over a long period of time since it may inhibit one's personal development. Becoming too intimate should also be avoided since it may shift focus away from the project objectives (PM1). Moreover, SM2 stated that having friendly relationships can be problematic because when caring about someone on a private level, it is difficult to avoid letting it affect the personal life outside work.

Three of the leaders reflected that a smaller team leads to better collaboration. This, since larger teams mean more employees and therefore more personalities to match, hence more relationships to handle (PM1, SM4, F1). Another positive effect of small teams is that the leader gets to know the employee on a more personal level (SM1). The interviewees that referred to small teams work with a team of five to seven employees.

In addition, the communicative contribution of each member is believed to increase in a smaller team (F3).

4.7 Phases of Team Development

Some interviewees discussed the importance of being aware of team dynamics theories. PM3 expressed that the leader has the mission to promote the team spirit by developing the team dynamics and the individuals, but also the leadership. Also as a leader it is important to question behaviors that may affect the team dynamics in a negative way (PM1). Some respondents reflected that becoming a good leader is a process, and it is about learning from previous experiences and mistakes (F3, PM2). To be able to develop a team, the leader needs to be present on site, close to the team (PM2). PM3 pointed out the importance of being united by expressing *"you win as a team and you lose as a team"*. Team dynamics and fostering an open environment are believed to be key factors to create an effective team according to SM4 and PM3. SM1 argued that the team should be formed as early as possible to create a good team dynamics. The interviewees work in a dynamic environment where a team is developing hence many have understood the importance of creating an integrated team early before the project enters more challenging phases (F1). This can for example be done through a production start-up workshop where the employees get to know each other and set the framework for the teamwork (SM4). SM1 described the connection between team development and production like:

> *Right now, we are in an early stage and in accordance with the time table. Often it becomes more petulant if the project loses time and budget, that is when it goes wrong. We need to work pretty much with being united.*

In the early stages of production, one interviewee described that leadership is about mediating both project and leadership-related objectives, and monitoring how the team works. In later stages, the leader should give more responsibility and then expect the team to be self-driven (SM4, F2). When the team has matured and is self-driven, PM1 and PM2 stated that the leadership does not need to be as active as in early phases of the production, when the team is new. At this stage, the leader can pass on the control to the team members. Several of the interviewees wanted to distribute the leadership to the team members, and avoid authoritarian leadership. SM4 said that the leadership should be more about delegating, supporting and coaching the team instead of directing them at this stage. When responsibility has been distributed, the leader should only support when needed and trust the employees to take care of the responsibility according to SM4. PM2 describes that the PM's leadership does not change as much during the production phase as the SMs' and the Fs', this since PMs are less present on the production site. PM2 further expressed: *"It is more that my employees get other type of tasks, rather than my leadership is changing"*.

PM1 described that the project team has developed during the production phase, in the later stages the team has become calmer, found their roles and how to collaborate. Another interviewee agreed, but emphasized the difficulties in finding the right roles within a project team. It was a process with ambiguous boundaries between the team members' responsibilities but eventually they sorted this out (F4).

SM3 argued that it is difficult when the team composition changes during the production phase. It would have been much easier to keep the same employees during the whole production because when the composition changes, the team development process starts all over again. It is a challenge when a new team member enters a team. F4 explained that as a new team member, feelings of being vulnerable, excluded and anxious of making mistakes are common emotions. Many of the interviewees thought that it is important to integrate a new member as soon as possible, such as inviting them to social activities, explain the organization, the project, systems and allocate suitable responsibility. By doing so, the new team member can contribute and become effective (F1). F1 further said that some leaders do not prioritize integrating new employees because they think it is too time consuming. For example, it was argued that it is easier to complete a task by oneself than teaching the new employee to do it. F1 stressed that the leaders who think in these patterns do not understand what the employees can contribute by getting a comprehensive introduction. The team dynamics change when new members enter and the leadership need to be adapted to the change with the goal to involve the new team member (SM2).

PM2 talked about creating a structure to identify upcoming problems as quickly as possible during production, and how to solve them, especially since problems can occur at any time during production. In project teams the employees communicate all the time but there is a risk that the team misses having formal meetings that also have to be carried out. To avoid this, new type of meetings can be introduced where a need has been identified (PM1). In meetings, there needs to be structured rules and procedures in order to facilitate the right conditions for the team to be effective. For example, SM2 has written down meeting rules on the protocol to clarify for all the team members what is expected of them. Moreover, these rules were collectively accepted at the production start-up workshop. SM2 has recognized that this has improved the meeting effectiveness.

When a team has become effective, F4 described that even in stressful situations the team can solve problems together. Further, a team is more effective when there is not too much focus on solving emergent happenings. If these do not occur, they have prepared their work well, according to PM1. PM3 reflected that when emergent happenings occur, the leader should signal calmness among the team members and focus on understanding the situation before rushing to hasty decisions. Three interviewees mentioned that a leader needs to be flexible to changes during production, and not entirely or always stick to the original plans (SM4, F2, SM2). This means that working in construction is a lot about prioritizing in regard to what is best for the team and the project (PM3, PM1).

It is important to have the courage to approach difficult discussions head on before conflicts emerge. In an effective team, conflicts should be solved in order to keep the team united. This is a challenge according to the interviewees but they all agreed about the necessity to step in as a leader. One PM3 said the following:

> *This is the difficulty, to solve things before they emerge in a big conflict… This is what I strongly react to, when you do not bring things up to the surface, instead you let them bubble below and then it creates an avalanche. Then you have not used the possibility to solve problems during that time*

Three leaders mentioned that conflicts can be necessary for team development (PM1, SM4, F1). PM2 described that there is a conflict phase that all teams go through; this phase can arise at different times during the production in different teams. Conflicts can be avoided by having closer relationships with each other since it then tends to be easier to understand and communicate with each other (SM2). In addition, all interviewees emphasized the importance of clearly communicating within the team to both solve and avoid conflicts. Planning can also minimize the amount of conflicts.

Depending on the individuals and situations, the leaders have different approaches to handle conflicts, for example talking to the involved one by one or the whole team (SM2). SM3 explained the following regarding the importance of communicating in conflicts: *"It is about a lot of discussion. What has happened? Why has it happened? Try to manage it and try to come up with good solutions"*. On the other hand, in an effective team, F3 argued that the members should be able to solve their own conflicts without the leader's assistance. Several of the respondents also discussed that it should be reflected on if a conflict is worth resolving in the first place and who should then be involved. There are both big and small conflicts on a production site.

Conflicts take a lot of time and energy from the team and sometimes small conflicts should be ignored according to PM1. It should be highlighted that conflicts create an uncomfortable climate for all team members, not only those involved (PM2). Moreover, small conflicts can grow bigger if they are not taken cared of (F2). Some are afraid of conflicts but the conflict management on site can be concluded as the quote from SM2: *"It is important to not be scared in my role, because conflicts escalate. It can be a lot of underlying conflicts on a construction site if you do not handle them"*. F1 furthermore mentioned that the PM can help to solve conflicts within the team since the PM does not meet the team every day, compared to the SM, and can therefore see problems from another perspective. However, if conflicts arise or employees does not feel well, the SM still has the obligation to take actions to make it better (F4).

5. Discussion

This chapter discusses inferences from the empirical findings and their implication for team leadership. The findings are further linked to the theoretical framework and the choice of methods. The similarities that have been found between Wheelan's principles on effective teamwork (section 2.3.1) and the empirical result are discussed in section 5.1-5.6. The similarities are visualized in Figure 4, where a X symbolizes a connection that will be discussed. When comparing to Wheelan's eight principles and her team dynamics model, it should be highlighted that her principles largely apply to organizational level (Wheelan, 2016) whereas the team dynamics of our findings are applicable on a team level.

	Wheelan's principles							
Our principles	Clear mission	Support innovation	An attitude that expect success	Put more value into quality and service before making profit	Provide planning and structure to employees	Let the team be self-driven	Set clear expectations	Reward team work rather than individual performance
Clear goals and values	X		X					
Mixed team								
Clear roles and responsibilities					X		X	
Support and involvement		X		X				
Personal relationships								X
Understanding of team development						X		

Figure 4: The connections drawn between the findings and Wheelan's principles.

5.1 Clear Goals and Values

Unity about clear goals and values can be connected to the production start-up workshop and Wheelan's (2016) first principle, *clear mission* (Figure 4). Further, it was clear from the interviews that it is important to collectively set articulated and clear goals and team-specific values within the team. Company A works with production start-up workshops to involve the employees in early phases of production in order to discuss and form conditions to create unity about goals and values. However, it has appeared in different extent how employees experience the continuous work regarding goals and values during the production phase. In some projects, the goals and values are printed in the beginning of the production while in others they are discussed frequently. In some teams, goals and values were communicated during meetings or visualized on office walls. It is important that it be a living document which gets updated and something the team discusses rather than just being a checklist. The communication gets more effective if it is direct instead of through large informative meetings as stated by Thoms and Fairbank (2008). This is believed to create consciousness, involvement and therefore a better team climate. The aim is that everyone should identify with the goals and values and feel proud to work in accordance with them. Therefore, goals need to be divided into sub goals, which are suitable and obvious to strive towards for each individual. The leader needs to facilitate discussions about goals and values, especially in early phases among the members as stated by Wheelan (2016). Early discussions, such as the production start-up workshop tend to facilitate united work towards goals. Every time a new member enters the team, this should be brought up again in order to develop the team dynamic and make the new member feel included. One aspect that we had in mind is that the team members take part in the team in varies amount of time. Some are only working in the team for a few months. This might lead to some people being less devoted to engaging in the goals and values, which underlines the importance of working with open discussions and striving to make everyone feel devoted. Jansson and Ljung (2011) claimed that some employee's competences are not used to a wider extent, which could be because these employees lack sufficient engagement, inclusiveness, in project goals and values.

The goals should be set as high performing standards to motivate the team to be successful, according to Wheelan (2016), related to the principle of *expecting success* (Figure 4). This is supported by our data in that many respondents emphasized the importance of this principle. Also, according to one respondent a positive attitude among the members is helpful in order to collaborate and have a positive working environment. To take this one step further, a positive approach may reduce the amount of conflicts and foster an enjoyable workplace. The positive attitude was also mentioned during the observed production start-up workshop in two of the project specific values: "Be happy - it is spreading" and "See possibilities - you cannot whine to get a better working environment". Another value regarding expecting success which was mentioned "We are a project that people wants to visit". This since the project team has ambitions to be better than the average project and set a good example on the district. It is inspiring to observe a team that expect success and set high goals, however we think that the goals should be set within realistic frames. If the goals are set unrealistically high there is a risk that the team cannot reach the goals and the members will feel unsuccessful and unmotivated.

5.2 Mixed Team

The most effective teams contain of heterogeneous team members according to Rapp-Ricciardi (2001) and Wheelan (2016). The members should possess different experiences, backgrounds (Rapp-Ricciardi, 2001) and competences (Wheelan, 2016). Tennant et al (2011) further claim that personalities should vary within the team. Almost all interviewees agreed on that a variety among these factors are of advantage in order to get an effective team. However, one interviewee stated that homogenous individuals tend to think alike which simplify collaboration. Homogeneous thinking might be favorable in the beginning of a team development but not in the long run since it can prevent the team members to complement each other and learn from each other's differences.

The interviewees also emphasized that generational belonging and gender are crucial factors as well to consider when composing a mixed team. In all teams that have been studied there is a mix of experience and educational background. According to

Björklund and Jönsson-Bergström (2013), the different experiences lead to increase creativity and a developing environment. Also, from what has been observed and what the interviewees have described, some of the teams are composed of a variety of personalities. According to Tennant et al. (2011) historically personalities were not considered when putting together teams, only experiences and competencies. Moreover, heterogeneous personalities are important to become an effective team. PM1 worked actively with different personalities, enabling them to understand, respect and learn from each other. This is done during meetings for example, and has been effective, where the team members collaborate better and have less conflicts. However, it is difficult to analyze all the team members' personalities since all members have not been interviewed.

F1 reflected that it is important to analyze team members' personalities in order see what personality is missing and need to be complemented in the team. For example, if the team is composed of fast decisions-makers, a more thoughtful team members should be added. This reflection was also applicable to the other factors when complementing team members. To exemplify, if the team already is staffed with the right number of employees, the leaders should check the existing team constellation and be aware of the homogeneous personalities. According to F1 one of the team members can get the assignment to try to be more thoughtful. However, the researchers think it is a challenge since it is not an easy assignment to change attitude and behavior over a night. Being aware of your own and your colleagues' personalities facilitates for more easily adapting behaviors. It can be believed to be easier to create heterogeneous teams from the beginning, or re-form teams, rather than change the individuals' behaviors. A suggestion in how to compose heterogeneous teams is given by Tennant et al. (2011). He argues that personality tests should be used among all employees. At Company A all employees do personality tests during internal courses but they are not used as material when composing teams. If personality tests are chosen as grounds for evaluation, it is important to keep in mind that employees are more complex than a test result since they are influenced by the surroundings and different contexts. We believe that using personality tests is more ethical and reliable than relying on one leader's own personal view of the employees. Today, PMs alone analyze personalities and use these as a basis for team formation. Wheelan's eight principles do not consider how teams should be composed. This might be because Wheelan's principles are directed to the team when it is already composed and under development. However, we believe that team composition is a basic condition necessary to consider because teams are temporary in the construction industry. New teams are composed, and are complemented with new members frequently, compared to other industries that Wheelan might have studied.

One of the teams consisted of only men, whereas the other teams had between one to three women members. This is a small number compared to the male members. In this respect, all interviewees have spoken of the benefit of having female colleagues because the environment tends to be friendlier. But there is a lack of women within the construction sector generally and on construction sites specifically. According to the researchers it is important to reach out to women and make them want to work in production. Company A tries to compose teams with a variety in age, where the older employees have more practical experience and complement younger employees who have new ideas and technological experience. The benefits of having a heterogeneous team is strengthen by Rapp-Ricciardi (2001) and Wheelan (2009). It has been noticed that the age span is between 20 to 45 in the teams, with a few exceptions with older employees. For example, one project team is composed of a majority of 30-year olds, who are quite new in their roles. This can be a result of that there is a generational gap in the construction industry as well as the boom in the construction industry right now where Company A have a lot of ongoing projects. Therefore, many younger employees have made a fast career advancement, taking on leadership roles, such as SM and PM roles. This result in these team do not gain the positive effects of having a variety in generational belonging. Therefore, it is important to be conscious about it and create a climate where it is okay to ask older colleagues at other projects for help.

5.3 Clear Roles and Responsibilities

According to Wheelan (2016) it is important to distribute responsibility among the team members, and in early phases of team development clarify the different roles within the team. Further, Rapp-Ricciardi (2001) also emphasizes the importance to allow employees to find their roles and seek for stimulating tasks. Clarity in roles and responsibility were also emphasized in the interviews, where all the interviewees highlight that these are basic conditions to develop a functional team. The interviewees further stressed the importance in being accessorial in affecting their working environment and tasks. Clear roles and responsibility are impregnated in Wheelan's four stages of team development. This can also be connected to the principle *set clear expectation* (Figure 4), meaning that all employees should know what is expected of them and their colleagues. The leader allocates responsibility to each employee in order to clarify the expectations of them. Sometimes this have to be adjusted during the production phase, because of changes in team constellations, workload, or emergent happenings that occur. Even though it is important with clear roles and responsibilities, two interviewees highlight that all employees need to have a project overview and know each other's areas in order to adapt and prioritize to the situation. In three out of four projects teams, where the interviewees are distributed in, it can be noticed that the role- and responsibility allocation is clear. To reach this is a process which does not happen over a day according to F4. In accordance to Wheelan's (2016) phases it can be proved that teams go through different phases where the roles and responsibility develops over time.

Expectations on the different leadership roles have been discussed during the interviews. The common opinion is that they expect leaders to provide the right conditions so that everyone can perform their work. Firstly, it can be noticed that one of the distinct expectations within the team is that F and SMs expect more support and visits from the PM. For example, they want to get support for conflict management, to monitor the team dynamic and get more feedback. Yet, they want to be self-driven and responsible for the production, but need regular checks and be seen by the PMs. Sandberg et al. (2017) stress that these double tendencies are common for SMs. It may lead to misunderstandings and decreased effectiveness in the team. The PMs stressed that the SMs should demand support when they need it, because they are not able to offer help at all times because of busy schedules. Therefore, it is crucial to discuss what is expected from each other within the team and set strategies regarding when checks and feedback will be given. This reinforce the importance of communication between managers as mentioned by Tengblad and Vie (2012). This can further be related to Wheelan's principle *provide planning and structure to employees* (Figure 4). If this is not done there is a risk that tasks are not completed or that leaders step down and perform tasks that are not within their area of responsibility. It further leads to an ambiguity between roles and an increase in workload since the responsibility distribution becomes diffuse. This can increase stress among the team members and inhibit the team to become effective.

5.4 Support and Involvement

Rapp-Ricciardi and Schaller (2005) state that members of a team need to have a sense of collaboration and be interested in each other in order to become a unified team (Rapp-Ricciardi, 2001). *Support and involvement* have been frequently discussed during the interviews both on a personal level and on a work level. The leaders use regular checks and feedback-meetings as two ways of getting to know their employees, care about them, develop them, learn what they desire and how to adapt the leadership to each employee. Feedback is mentioned in some interviews and on the production start-up workshop where one of the values were "Give feedback and talk about things that feels wrong in order to improve". Even managers need to talk to each other by having spontaneous checks (Tengblad & Vie, 2012). Wheelan (2016) also stressed the importance of giving support and encouragement during team development. Compliments are also something that should be given to a larger extent according to PM1. In accordance with Wheelan's stages, encouragement becomes more important as the team develop. In some of the interviews, flatter and encouragement have not been brought up, which might indicate that the team is in an early phase of its development. All employees should take on the responsibility to give feedback as stated by Jansson and Ljung (2011). This is also highlighted by some of the respondents.

Support and involvement signal that many of the leaders at Company A have a people-oriented approach to leadership, where the employees and soft values are in focus. For example, two of the PMs expressed that *"I believe that people are the key to successful projects"*. This can be related to principle *put more value into quality and service before making profit* (Figure 4) which is one of Wheelan's (2016) principles. This principle highlights that other goals are important than just the economic goals., for example, by putting more focus on quality, process and employees. Garg and Jain (2013) argue that a leader need both people and task orientation skills in their leadership style. This was supported by the interviewees, where it can be noticed that some leaders were more people-focused while others put more focus on tasks. Nevertheless, two out of three PMs were foremost people-oriented. Their interview answers have involved emotions, and care about the employees' development. The third PM expressed financial goals as a motivation but that the employees form the conditions to reach them, hence there is a need to understand the importance of both people and task oriented leadership. In one of the PM's team there are additionally three employees who have been interviewed and they are all sharing the people- oriented leadership. As an interpretation of the empirical data it can therefore be presumed that values, emotions, and opinions has spread and been influenced within the team, and they became unified about them.

What is, according to the researchers, seen to affect whether a leader is mostly people or task oriented can be the age and experience of the leader. Many of the young leaders are seen to be task-oriented and this might be a result of that they feel more confident in planning and structuring their work around tasks before they can lead others. In the interviews, it has appeared to be two different viewpoints in connection between people- and task oriented leadership. Some tend to be more task-oriented with the believe that if there is a clear planning, it will lead to that the employees will feel more involved, enjoy work and be effective. Others believe the opposite, and tend to be more people-oriented with the intuition that by focusing on people first, the project team will deliver per automatic.

Wheelan (2016) emphasized that an effective team is where the members feel involved, committed and valuable to the organization. This was also mentioned in the interviews. It is interpreted by the researchers that many of the leaders reflected a lot about how they can improve their way of working in order increase the effectiveness of the team. Involvement can be linked to Wheelan's principle about *supporting innovation* on an organizational level (Figure 4). During the interviews, this is seen when PM2 describes that the employees get responsibilities and are involved to come with innovative ways of working and present it to PM2 instead of being instructed. If all employees contribute and share their opinions, new effective ways of working can be shaped. Three examples from the interviews of innovative ideas are to work with new meeting structures, asking the employees a lot of questions and new ways of communicating like visualization tools. These innovations are seen as other ways of involving the employees and make them more included and feel important. In accordance with Jansson and Ljung (2011) it is seen to be important for the leaders to involve all employees and not risk that only some individuals have the ability to affect.

Involvement is believed to foster motivation according to some of the interviewees. Motivation was not really discussed by the interviewees. F4 claimed that motivation needs to be more in focus and discussed within the teams since people are motivated by different things. PM1 was responsive and saw what an employee were motivated by and this resulted in a re-constellation of the team where the employee found more motivation teaching younger colleagues.

Involvement is also believed to foster a learning environment. This is important according to Raes et al. (2015) since a team that becomes effective need to continue to develop and learn in order to stay effective. From an organizational perspective, it is desirable to have teams which strive to learn more and stay effective. This since when individuals strive to develop they can also motivate others and learn from each other. This is desirable in the construction industry with temporary project organizations, since when employees are motivated to learn from each other, the effectiveness increases in new team constellations.

5.5 Personal Relationships

The interviewees emphasize that creating personal relationships within the team is crucial for collaboration. During stage three Wheelan (2016) suggests that team members create positive working relationships. However, she does not discuss that these should be on a personal level, which was mentioned in the interviews. This is believed to be one of the biggest differences between the result in this thesis and Wheelan's theory. Tengblad and Vie (2012) claimed the importance of talking about personal issues and joking to create relationships. Thus, some of the interviewees stated that by knowing each other on a more personal level, the communication gets more effective, the work becomes easier, and it tend to minimize conflicts since they have an understanding for each other's differences. Relationships is connected to teamwork, and Wheelan's eighth principle, *rewarding teamwork rather than individual* *performance* (Figure 4). If the team establishes close relationships it facilitates for better collaborative work.

From the empirical data, it is shown that the team size matters regarding personal relationships. This supports Steiner referred in Wheelan (2009) that the bigger the team is, less cohesive and intimacy is created between the members. According to Wheelan (2009) and F3 the communication in small teams tends to be structured and it is easier for each member to contribute. On the other hand, in smaller teams there is a risk that formal meetings are forgotten since much of the communication is done spontaneously, which is not always effective. Sometimes formal meetings are needed so that everything is covered and all team members get all and the same information.

The discussions about team size have not been in direct focus during the interviews, somehow many of the respondents have ambiguously discussed it. Wheelan (2016) stated that the optimal team size is three to seven employees. Here we note that the interviewees were part of teams of around seven team members. The lack of discussion of team size may reflect the fact that this was not seen as a problem in the study. However, the members which were part of the smallest team, with five employees, said that communication and collaboration was easy compared to larger teams because there are not too many relationships to handle.

The interviewees understood that the process to get to know each other and become effective takes a long time and may vary depending on the individuals involved. Two of the respondents explicitly thought that teams that become effective should be maintained or kept together. Several respondents thought that integrating new members take energy and disrupt the team dynamics. This view is supported by Jansson and Ljung (2011) who argued that effective teams should be maintained to execute similar projects in order to minimize the energy needed to develop team dynamics. Instead, this energy could be put into focusing on the project. At the same time, the interviewees were aware of that new employees' needs to be integrated and that it is necessary for Company A. It was also mentioned by a PM that teams should split up and re-constellations should be formed to increase individual development. With this in mind, it can be discussed whether an effective team should be kept over several projects, developing together and meeting new challenges in order to improve effectiveness. However, this strategy should not be implemented for too long, because it is important to create a cohesiveness on the whole district level. Team members should be adaptable to new team constellations since this is necessary in the dynamic construction industry (Tennant et al., 2011). In accordance with this view, by being flexible and collaborate with different colleagues within a district, the risk of creating teams that become separate units within the district decreases. Such teams risk forming sub-culture, which might not be in line with Company A's values on an organizational level. This should therefore be avoided, and teams should be re-formed now and then in order to open up for new relationships and to increase flexibility.

5.6 Understanding of Team Development

According to Jansson and Ljung (2011), the leader needs to be flexible and understand what the team needs in a specific situation, depending on where the team is in the team dynamics model. As analyzed from the interviews, four out of eleven leaders seemed to have good knowledge and understanding of team-development models and theories.

We surmise that these leaders either have a broad experience of being leaders or they have a university background that includes management studies of some kind. Those who have long work experience might have attended leadership courses over the years. Also, it should be highlighted that Company A implements improvement endeavours, which reinforce the fact that more employees reflect upon leadership and team dynamics.

By working with the development of the team, a leader anticipates the team to become self-driven, which, which is what Wheelan's principles *let the team be self-driven* (Figure 4) and stage four in the team development model argue. In this stage Jansson and Ljung (2011) believe that the leader should embody a more supportive and coaching role. This was reinforced by the interviewees since many of them wanted to distribute the leadership and control to the team members once the team was more matured. In the early stages, the leader needs to monitor the team and instruct the employees.

Regarding the different stages, two of the project teams were seen as self-driven and had matured to stage three and four in the model. In both cases, the majority of the team members had worked together for many years and created strong relationships with each other. Therefore, the leaders felt more comfortable delegating responsibility and expected the team to deliver. The other two teams studied were newly formed and had not worked together before, and therefore needed more time and active leadership to mature. These teams were in the early stages of the team development model.

Rapp- Ricciardi (2001) drew a connection between the project life cycle and the team development process. Teams that become effective have better conditions to handle a stressful project environments and challenges. Three of the interviewees stressed that it is beneficial to get to know each other and create a good team dynamics in the beginning of the production phase in order to have better potential to handle challenges within the production. In mixed teams, it becomes especially important to understand each other in order to work effectively together and use the full potential. Production start-up workshops and similar activities are ways that are used to facilitate getting to know each other better and it is of advantage to have them as early as possible to become an effective team as fast as possible.

To be able to become an effective team, the interviewees highlighted the importance of approaching conflicts before these escalate to bigger ones. This is done through an open communication throughout the production. Wheelan (2016) agrees and adds the importance of taking the team perspective in a conflict and not personalizing it. From the leader's perspective, this reflects the importance of seeing the team as a unit and trying to solve things within the team. The interviewees expressed that small conflicts are also seen as good for team development, something which is also suggested by Wheelan (2016). Conflicts are natural during team development as noted in Wheelan's (2016) stages. We believe that conflicts that are handled can bring people together and make the team more cohesive. Also trust and respect can increase among the members and therefore facilitate for future collaboration.

Some teams are more mature than others as observed in this study, where the immature teams are in the early stages of team development. To facilitate for developing as a team, a leader needs to adapt different leadership styles in order to meet the individuals and the situation (Wheelan, 2016). However, not all SMs that have been interviewed were aware that their leadership might change during the production phase. They did not exemplify how leadership is performed differently depending on the individual or the situation, instead a common answer was *"I try to keep a similar level"*. The same pattern can be seen among the Fs. All PMs reflected a lot on their adaptable leadership. They particularly adapted their leadership to the individuals since they were not on site on a regular basis. We believe that PMs put a larger focus in people since they have a long experience working as leaders. Further they do not need to focus on the execution of the production since that is expected to be the SMs' full responsibility.

5.7 Choice of Limitations and Method

Considering the limitations of the study, the findings might have varied if other interviewees were chosen. Since we have only interviewed three different roles in the same part of a company, they have had quite similar experiences. This since, people who work together influence each other even though they have different backgrounds. We have been aware that some interviewees preferred to share their opinions more than others. However, the intention has been to balance all interviewees' answers equally in this study. We are also aware that some might have said things that do not mirror practice or some answers might have been adjusted by the interviewee because of being afraid of expressing their personal opinions. This is not something that we could have easily avoided, but by interviewing several team members from each team, we have been able to get a more realistic view of the reality.

It might have been of interest to interview a larger number of employees, but we reflected that an addition of for example ten employees would not have affected the findings to a larger extent. Because the overall opinions and arguments have been similar among our eleven interviewees. If the aim would have been to get a broader view, an additional fifty employees within different parts of the company could have been interviewed in order to get other nuances of the findings.

Also, what happens within the studied teams in this thesis is believed to apply for many workers on Swedish sites. We are aware that our limitation led to only studying few staff members on a production site, compared to the large amount of people working on sites. But we believe that if a management team is effective it may result in the rest of the people working on site having better opportunities to become effective as well.

Regarding the qualitative method, it was believed to provide reliable answers to the research questions. The choice of performing both interviews and an observation of a production start-up workshop was made in order to get a broader and more comprehensive view of team dynamics at Company A at district level. This was preferable when comparing the interview answers of individuals with a practical workshop since all teams have production start-up workshops in the beginning of their team development processes. We could only participate in one of these workshops since the studied teams are in different stages of the production phase. Therefore, interviews were performed to be able to study four different teams.

We have different connections to Company A, where one of us has been working and been part of a trainee program. This has been of advantage in our interviews since a personal chemistry was already created by some of the interviewees and the researcher.

By having relationships beforehand, the interviewees were more open and shared sensitive personal experiences which were of great value for the study. However, the connection might have biased the interpretation of the data. This is where the other researcher had an important role, having a distanced stance and questioning the interpretations made.

6. Conclusion

To conclude, an effective team consists of heterogeneous individuals where the individuals take advantage of each other's strengths and competences. The individuals should also learn from each other and develop together as a team. The formation of future project teams should firstly be based on relevant personalities, experiences and competences, and secondly on age and gender to get diverse teams. In a diverse teams, there must be clear goals and roles, where all members know what is expected of each member. The interviewees paid a lot of attention to soft factors such as involvement and fostering personal relationships. This is reinforced through the project specific values set during the observed production start-up workshop. In conformity, in the interviews, nearly all focus has been on the soft factors which are reflected in the findings and discussion. Further, this means that an effective team can be summarized in the following principles:

1. Unity about clear goals and values
2. A mixed team
3. Clear role- and responsibility distribution
4. Support and involvement
5. Personal relationships between members
6. Understanding of team development

By characterizing what an effective team means to a project organization, it becomes easier to establish what to work with in order to reach an effective team. These principles should be implemented as guidelines in project organizations. Both leaders and employees need to be aware of these principles in order to improve their effectivity.

To achieve the six principles, it can be concluded that some conditions have been found which site management could work with. It is of significance to have an adaptable leadership style, adjusting the leadership towards each individual and situation during the team development process. The leaders should also have a direct communication with the employees, by having spontaneous checks and giving feedback, but also have formal booked meetings. In addition, the leader, as well as the employees, need to approach and solve conflicts as early as possible when they emerge within the team. If a team fulfils the principles, the workplace can achieve an enjoyable climate where all team members feel important and valuable.

It can further be concluded that most of the findings in this study support the proposed theoretical framework. However, soft factors have had a bigger significance in the empirical findings than expected. This may be an effect of cultural and/or sector differences between this study and Wheelan's study.

6.1 Recommendations

This study did not consider the perspective of professional workers and sub-contractors due to the time constraints of the study. Sub-contractors and professional workers are influenced by the activities and team dynamics in the teams studied in this thesis. In future studies, these roles can be explored more carefully in the context of effective teams. Also, there might be a big difference between sub-contractors and contractors organizational culture which therefore can be of interest to explore further. The notion of personality tests was discussed in this study but were not deeply analyzed.

The following ten recommendations are suggested:

- It is important to establish collective goals and values early on, e.g. during a production-phase start-up workshop. Teams which do not work continuously with integrating goals and values may learn from the teams which do create a unified view about goals and values, for example, by discussing it on meetings or visualize it in the office.

- Leaders should create opportunities for the team to talk about their different personalities and make them understand, respect and learn from each other. One example is the exercise about sharing personal experiences. This was implemented in one of the teams resulting in improving collaboration and decreasing conflicts. Therefore, this way of working can be adapted in other teams.

- Personality tests can be a complementary guideline when forming teams with heterogeneous personalities, but they should not be followed slavishly.

- It is necessary to clarify what is expected of the different roles since this may be ambiguous in some teams. For example, it should be established in advance when checks or feedback should be given. This will increase effectiveness and decrease misunderstandings.

- Feedback was appreciated and therefore the leaders and team members who do not give feedback, should start doing so. This since leaders can influence employees' behaviors by positively reinforcing appreciated behaviors.

- As a leader, it is important to understand what motivates team members. A suggestion is to have more discussions about motivation in the production start-up workshop or in a separate motivation-meeting.

- Core parts of effective teams should be maintained over several projects in order to save time spent on team dynamics. This core-team, however, needs to be welcoming to new employees.

- We believe that the process of integrating new employees can be improved such as being well-prepared and more adapted to individuals' needs, for example, having a clear structure when a new team member enters, and having one team member who takes responsibility for this person.

- The awareness of team development varied between the interviewees. This awareness seemed to reflect on team effectiveness and therefore organizations should invest in leadership education with practical exercises.

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Appendix

Interview questions

Our master thesis will be published and accessible for the public.

- Is it okay if we use your answers anonymously in our master thesis?
- Is it okay if we use your citations?
- Is it okay if we record the interview?

Introduction

- **What is your role in this project?**
- **Here is a mind map of the employees working at this project. Could you describe your team?**
- **How did you become part of this team?**

Leadership

- **What is leadership according to you?**
- **How does your leadership take place in this team? Please give some examples from your workday?**
- **How does your leadership change during the production phase? Could you exemplify?**
- **What do you do when a new employee enters the team?**

Communication

- **What is communication according to you?**
- **How do you communicate the goals and values of the project?**
- **What kind of meetings do you have within your project team?**
- **What is a conflict according to you?**
- **We assume that conflicts arise sometimes. How do you handle conflicts that arise within the team?**

Team

- **What is a functioning, effective team according to you?**
- **How do you work to create such a team?**
- **What is seen as challenges?**

- **What do you expect from your project manager/ site manager / foreman to be able to work effectively?**

Outro

Thank you for an interesting interview!
Is it okay if we get back to you if we realize that we missed something?
Do you have anything that you want to add or ask us before we end this interview?