UNIVERSITY OF AGDER

Work rhythm, flow and success in a project

A case study research

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This master's thesis is carried out as a part of the education at the University of Agder and is therefore approved as a part of this education. However, this does not imply that the University answers for the methods that are used or the conclusions that are drawn.

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Acknowledgement

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Abstract

Organisations and individuals are shaped and influenced by their environment and interaction with others in a conscious or unconscious manner. Due to increased competitiveness, organisations need to be aware of elements in their environment and how these can affect operations and outcomes. Rhythms in organisations and the employee's work rhythms are considered to influence flow and the achieved level of success in organisations.

This thesis aims to investigate factors setting the work rhythms for organisations and individuals, and to study whether work rhythms influence flow and level of success. Our research question was: *"What factors sets the work rhythm and how does the work rhythm influence flow and level of success?"* The theoretical foundation that was used to approach this research question, were various terminologies within the field of rhythm, flow and success.

Thereafter, a case study was conducted to gain a deeper understanding of the phenomenon. This study is based on interviews with workers in "Nor-Oil", an organisation working within the petroleum industry. Nor-Oil was responsible for one part of the project studied in this case, project Alpha. Nor-Oil had many challenges during this project, where some of these were considered to influence rhythm and flow of the workers and the level of success.

Through this study, we found that the main internal factors setting the work rhythm were: insufficient planning in project organisation, no clear and realistic schedules, contract workers, structured and informative handover meetings and unstructured and inefficient project meetings, in addition to the external factor Acknowledgement of Compliance. In project Alpha, we found that the good temperamental job-fit of the workers was most likely a factor influencing the work rhythm in a positive way. The experience of flow was present for some of the workers, but it become clear that it was a highly individual factor. From this we can state that flow is not a prerequisite for gaining success. Project Alpha maintained the quality of work and was completed within the final deadline, while costs were understood as non-relevant factor for the level of success of project Alpha. From this we can state that factors setting the work rhythm can have an influence on flow, however flow is not a prerequisite for success. However, other success factors can also determine the level of success for project Alpha. One of these is the end-user, since the end-user appeared to be satisfied with the product.

Based on our findings, we suggest some improvements for future projects. We believe these factors will increase work rhythm and flow in similar projects.

These are the following:

- Having a clear and updated organisational matrix
- Distributing information to the right people
- Prioritising efficient meetings.

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1. Introduction

This chapter aims to give a short presentation of the background of the study and the topic of this master thesis. It will be explained why this topic was studied, and why we found it interesting and motivating.

1.1 Background of the study

Global competitiveness and attractiveness are becoming increasingly important for many organisations (Shenhar, Dvir, Levy, & Maltz, 2001). Rapid changes in business environments require organisations to be "quicker, more responsive, and more competitive than ever" (Shenhar et al., 2001, p. 703). These changes are affecting how businesses and projects operate (Gilbreath, 1988). The traditional business models are replaced with "project organisations" where the expectations and pressure to succeed are higher (Gilbreath, 1988; Shenhar et al., 2001). Time, quality and cost constraints are often essential for organisations to survive in a long term perspective. These constraints tend to affect organisations, and their external and internal environment (De Wit, 1988; Lim & Mohamed, 1999; Munns & Bjeirmi, 1996; Shenhar et al., 2001). Due to competitive concerns and demands from the environment and their business partners, organisations may need to increase their understanding of rhythms and flow in their work.

In our master thesis we wanted to immerse into an area that we believed is increasingly important for today's organisations. We have different specialisations within our master degrees, but have a mutual interest in organisational theory, and are interested in areas covering organisational strategy. After some considerations and research we decided to focus on working rhythm in organisations. Rhythms are present and shape the organisation and worker's daily life through an unconscious, social framework of interaction (Knudsen, 2012). We also included flow, since this concept is closely related to work rhythms (Knudsen, 2012). Flow is understood as an optimal working condition where a person performs at its best (Knudsen, 2012; Quinn, 2005).

1.2 Research question

We believe that we all experience work rhythms in our daily life and in particular as students. Rhythms together with flow were therefore subjects we could relate to, and therefore considered this as an interesting phenomenon to study. Through this thesis, we wanted to investigate whether work rhythm influence flow and could be related to the level of success

for organisations, in addition to factors that could set work rhythm. Thus, the aim of this thesis is to identify factors setting work rhythms in a project and whether these rhythms could lead to flow and a successful project outcome. We came up with the following research question:

What factors sets the work rhythm and how does the work rhythm influence flow and level of success?

To approach this research question, various terminologies within the field of rhythm and flow was examined. Entrainment and social construction are two factors that create and set rhythms in organisations (D. Ancona & Chong, 1996; Knudsen, 2012). Entrainment is when an activity is adjusted, matched or synchronised with another activity. For example both physical and behavioural rhythms need to synchronise and adjust to the new night and day cycle when one travelling between time-zones and suffering from jet-lag(D. G. Ancona & Chong, 1992; D. Ancona & Chong, 1996; Pérez-Nordtvedt, Payne, Short, & Kedia, 2008). Social construction is patterns of accepted and expected behaviour in interactions between individuals(Knudsen, 2012). Temperamental job-fit is required for achieving flow. Temperamental job-fit is the fit between personal abilities, environment, job characteristics and job demands(Edwards, 1990; Knudsen, 2012).

To be able to increase our understanding of this phenomenon and answering the research question, a case study was performed. This case will be a specific project and it is used to analyse if theory corresponds with reality.

1.3 Introducing the case

In order to explore this research question we performed a case study. The case dealt with the rhythms and flow of a project conducted by an organisation in the petroleum industry in Norway. The case study consisted of the organisation "Nor-Oil" and the project, “project Alpha". “Nor-Oil” was one of several companies working on this project. However this thesis will focus on the activities that “Nor-Oil” dealt with.

The implementation of project Alpha led to great challenges for Nor-Oil. The original scope of the project had grown tremendously from what was originally planned, and this led to a high pressure on the employees of Nor-Oil. Because of the increased scope, Nor-Oil had to recruit many external contract workers. These contract workers created a tendency towards loyalty conflict in the company. In addition, deadlines were set tight, the costs exceeded the

original cost framework and the communication in the project organisation was poor. Both the start-up and completion date of the project was postponed several times due to external reasons that Nor-Oil did not control.

The different incidents described above were believed to have influenced the rhythm of the workers in project Alpha. This case was therefore considered as interesting and relevant to explore the research question. The case is explained in detail in chapter 3.1.

1.4 Structure of the thesis

The thesis starts with chapter 1, the introduction, where the background of this thesis, the aim, research question and some relevant theoretical concepts are introduced.

Chapter 2 is the literature review, which outlines relevant theoretical concepts which are understood as relevant for approaching the research question. At the end of the literature review, the conceptual framework will be presented. This figure illustrates the relationship between relevant theoretical concepts.

The research method is described in chapter 3 and starts with a detailed explanation of Nor-Oil and project Alpha. Then different methodological approaches are presented, and the choices that have been made will be justified. The choice of qualitative method with a case study of project Alpha, lays the foundation for the results and further analysis.

Chapter 4 describes findings from five interviews with respondents working in project Alpha. The results from the interviews are thoroughly described based on the sections in the interview guide.

In chapter 5, the main findings from the results is analysed based on the previous research and the literature review in chapter 2.

On the basis of the results and analysis in chapter 4 and 5, a conclusion is drawn in chapter 6. In this chapter, the main findings are summarised, and the contribution to extend the understanding of this phenomenon is described. Based on this, some recommendations to Nor-Oil are outlined, and suggestions for further research are included.

2. Literature review

In this chapter theories and terminologies relevant to investigate the research question will be explained. The theoretical framework is based on theory applicable to understanding rhythms and flow. These are social construction, entrainment, cues, temperamental job-fit, time, communication and interaction, and project success. Three types of organisational structure are also explained. The terminologies and their relationship are illustrated in a conceptual framework in the end of the chapter.

2.1 Rhythms

Rhythm is a well-known term that is frequently used in different contexts. Rhythm is often associated with music where it is viewed as the foundation of the music and ensures a successful completion of the musical piece. The term is also widely used within the field of sport in which athletes can explain their performance by "I got into a good rhythm". They are then referring to how their body worked; that they found a good pace and were able to keep it going throughout the competition. A football team is dependent upon interaction between the players to achieve a good collective rhythm in the match. However, rhythms also exist on other levels and in this thesis we will examine rhythms from an organisational point of view.

Rhythms can be interpreted as natural or man-made. Natural rhythms can be understood as something that one cannot influence e.g. night and day, the different annual seasons or the weather (Knudsen, 2012). Human life is shaped by and depending on these natural rhythms. Man-made rhythms are on the other hand created and constructed by humans (Knudsen, 2012). These types of rhythms can be social settings created by human interactions. The calendar with 7-days weeks is an example of a man-made invention that sets human rhythms (Knudsen, 2012). These rhythms are always present and help simplifying human interactions because everyone relates to the same day and date. Man-made rhythms through social interactions are the main focus in this thesis and will be examined in more detail.

2.1.1 Organisational rhythms

Although natural rhythms may be underlying and influencing rhythms within organisations, organisational rhythms are primarily considered as man-made (Knudsen, 2012). Organisational rhythms are specific rhythms that can be observed and identified in organisations where individuals interact with each other. Good group-level rhythms and organisational rhythms are prerequisites for optimal cooperation between individuals in the workplace. These rhythms can be linked to the possibility of achieving flow, both individually

and together with others (Knudsen, 2012). If the group-level rhythms and organisational rhythms are not good then this would make it difficult to cooperate and the possibility of achieving flow would be smaller.

Organisational rhythms together with individual rhythms and group rhythms lead to collective work rhythms. Good collective work rhythms are created when these rhythms have a good balance between each other (Halaas & Nakkestad, 2009). Individual rhythms are described as rhythms shaped by each individual and are determined by the individuals' prerequisites and needs. Furthermore, group rhythms can be understood as rhythms in interactions between several individuals. Whenever individuals come in contact with each other, a group rhythm is created (Halaas & Nakkestad, 2009). For the group to function and to create a good rhythm, the individuals must adapt their individual rhythms. The individuals also need to consider the groups best interest and the work that needs to be done. Individual rhythms, group rhythms and organisational rhythms will together form a collective work rhythm for the organisation which leads to the condition called "flow" (Halaas & Nakkestad, 2009).

2.1.2 Social construction and sync

Social construction is a form of man-made rhythm that describes behavioural patterns in interactions between individuals (Knudsen, 2012). Social construction can be observed in all settings where there is an interaction, and can be interpreted as a set of underlying rules for accepted and expected behaviour. Social construction is one of the factors that are involved in creating and setting guidelines for organisational rhythms and is therefore not alone decisive for whether or not the organisations achieves a good rhythm and flow (Knudsen, 2012).

Different departments in the organisation can develop rhythms based on social constructions. However, it is not certain that the particular rhythm from the different departments match the rest of the organisation. This can lead the members of the organisation out of sync (Knudsen, 2012). When the rhythms in an organisation are in sync, the interactions between members in the organisation are believed to be efficient. The interactions may be of different character e.g. "purposes of coordination, exchanges of information, and other communicative actions, including social interactions" (Knudsen, 2012, p. 19). If one is aware of the rhythmical mechanisms and the impacts of cues, the organisation itself can be involved in determine the degree of flow and sync (Knudsen, 2012).

2.1.3 Entrainment

Entrainment is a theory that has been applied in many fields, such as biology, physics and psychology (D. G. Ancona & Chong, 1992; D. Ancona & Chong, 1996; Knudsen, 2012). This thesis will focus on entrainment in organisations.

Entrainment is when a cycle or pace of an activity is adjusted, matched or synchronised with another cycle or activity within a system so that they are in rhythm (D. G. Ancona & Chong, 1992; D. Ancona & Chong, 1996; Pérez-Nordtvedt et al., 2008). In this context, a cycle is understood as a phenomenon which is repeated periodically, while pace or tempo describes the speed of the activity (D. G. Ancona & Chong, 1992; Pérez-Nordtvedt et al., 2008). Entrainment occurs when internal organisational cycles are changing due to external cycles in the environment (D. Ancona & Chong, 1996). For example, the need for fashion or sports equipment is determined by the annual season, and stores are required to adapt their assortments to these seasons. A common understanding is that entrainment is about rhythm and cycles of activities within and outside systems. This means that entrainment is derived from a system of cycles which often are influenced by other cycles within or outside the system which appear in synchrony (D. G. Ancona & Chong, 1992; D. Ancona & Chong, 1996). Thus, entrainment is related to organisational behaviour and the adjustment to others, whether this is individuals, groups, organisations or the environment (D. Ancona & Chong, 1996). This means that for individuals or groups to be able to have the same phase or period their cycles are caught by external cues in the environment, such as similar work time or vacation. (Aschoff, 1979 in D. G. Ancona & Chong, 1992)

Organisations can manage the elements of entrainment, for example cycle or pace, so that it has a positive impact on their performance. Organisations should therefore detect, predict and adjust activities to the rhythms which occur naturally in their environment (Pérez-Nordtvedt et al., 2008). Systems can either become entrained or entrain another systems and entrainment take place conscious, subconscious, or instinctive (D. G. Ancona & Chong, 1992).

However entrainment does not always occur, because sometimes the internal cycles are not linked to the external environmental cycles (D. G. Ancona & Chong, 1992). This means that individuals, groups or organisations follow their own pattern and rhythm without having to be entrained. Reasons for individuals, groups or organisations to not entrain can be that they have not perceived the signals or cues in their environment, it is not understood as beneficial to entrain or it is too complicated for them to change their rhythm (D. Ancona & Chong,

1996). Such an example is when a R&D department follow their own pace and innovation strategies without corresponding with marketing department and consumer demands, or when pharmaceutical companies not priorities research on some medications even though the society request it (D. G. Ancona & Chong, 1992; D. Ancona & Chong, 1996).

2.1.3.1 Division of entrainment

Entrainment may be divided into five different groups, and these divisions reveals that entrainment occurs at different levels in organisational behaviour (D. G. Ancona & Chong, 1992).

The first level of entrainment which is described is tempo and pace entrainment. Tempo and pace entrainment is when two or more activities are carried out and adjusted into the same pace, tempo or speed. From a series of studies carried out by Kelly and McGrath in 1985, cited in D. G. Ancona and Chong (1992), it is pointed out that if individuals and groups are given a certain time limit, their pace of work would be adjusted to this limit. Based on these studies Kelly and McGrath found that the tempo increases, when shorter time limits are given, and decreases when time limits are extended. Therefore in this type of entrainment, tempo is adjusted within the given time frame either subconscious or conscious (Lauer, 1981 and Amato, 1983 in D. G. Ancona & Chong, 1992)

Another category of entrainment is synchronic entrainment. Synchronic entrainment occurs when pace, cycle or rhythms of two activities or behaviours are similar and matching. An example is the predictable annual cycle of attendance in parks that often has the same pace and cycle as school holidays (Van Maanen and Kunda, 1989 in D. G. Ancona & Chong, 1992). It is difficult to change cycle, pace or rhythm, since these are entrained patterns which are repeated over time within a specific period (D. G. Ancona & Chong, 1992). If synchronic entrainment does not take place, the environment may not perceive the progress that is made and this can result in lack of performance for individuals, groups or organisations. This occur when the external environment do not notice the changes nor interpret it (D. G. Ancona & Chong, 1992).

The third category is harmonic or pseudo entrainment. This occurs when two or more activities or behaviours appear to be synchronised or in harmony even though neither phase nor cycles are adjusted to each other. This can be present at individual, group or organisational level (D. G. Ancona & Chong, 1992; D. Ancona & Chong, 1996). At the individual level, the mentor-mentee relationship is a good example, where two people do not

share same cycle due to different stages in their career, but they still appear to be in harmony (D. G. Ancona & Chong, 1992).

The fourth category of entrainment is social entrainment. Social entrainment occurs when individual activities and cycles are entrained and modified into shared social cycles at various levels based on social customs, norms and institutions (McGrath and Rotchford, 1983, cited by D. Ancona & Chong, 1996). This can for example be weekly cycles, workdays or weekends (D. Ancona & Chong, 1996).

The final and fifth category is phase entrainment. Phase entrainment is associated with the phase of the cycle and not its periodicity, where it is more important that the periods or activities are correlated and not necessarily synchronised. An example of this is when businesses need to aligns their business tax return to the phase of the fiscal year (D. Ancona & Chong, 1996; Pérez-Nordtvedt et al., 2008).

2.1.4 Cues

The aim of this thesis is to investigate and identify rhythmic cues that are important for setting the rhythm in project Alpha.

Cues are described as environmental factors or signals (Aschoff, 1979 in D. Ancona & Chong, 1996). Internal or external signals affects cycles and the system to be able to have similar phase, periodicity, or magnitude and thereby become synchronised (D. G. Ancona & Chong, 1992; D. Ancona & Chong, 1996). Fiscal years for firms and semester dates for students are examples of pacers which capture cycles which then are synchronised (D. Ancona & Chong, 1996; Ballard, 2009). Cues therefore work as time givers, pacesetters or synchronisers and can be found in many situations and occur in different pace (Ballard, 2009). The exposure of cues or new pacers affects the ability to entrain to new cycles, it also affects how entrainment and re-entrainment to new cycles take place (Ancona & Chong, 1992; Aschoff, 1979 in Ancona & Chong, 1992; Mackie, 1977 in Ancona & Chong, 1992).

In organisations, cues are often found to be important to set rhythm (Knudsen, 2012). Cues helps to set the appropriate tempo for the activity and create patterns for cycles (Ballard, 2009). Some examples of cues that can be identified in organisations are meetings, interactions, appointments, deadlines, schedules and sequences or lunch and coffee time (Knudsen, 2012, p. 18). These organisational cues are understood as rhythmic cues, since they all can be important for the rhythm of an organisation (Knudsen, 2012). For instance, the

organisations' work schedules often an important cue that employees adapt to, which may override employees normal day and night rhythm (Pérez-Nordtvedt et al., 2008). Meetings also play an important part in identifying organisational rhythms and are understood as a prerequisite of sufficient communication and interaction that sets the foundation of the organisational rhythms (Knudsen, 2012).

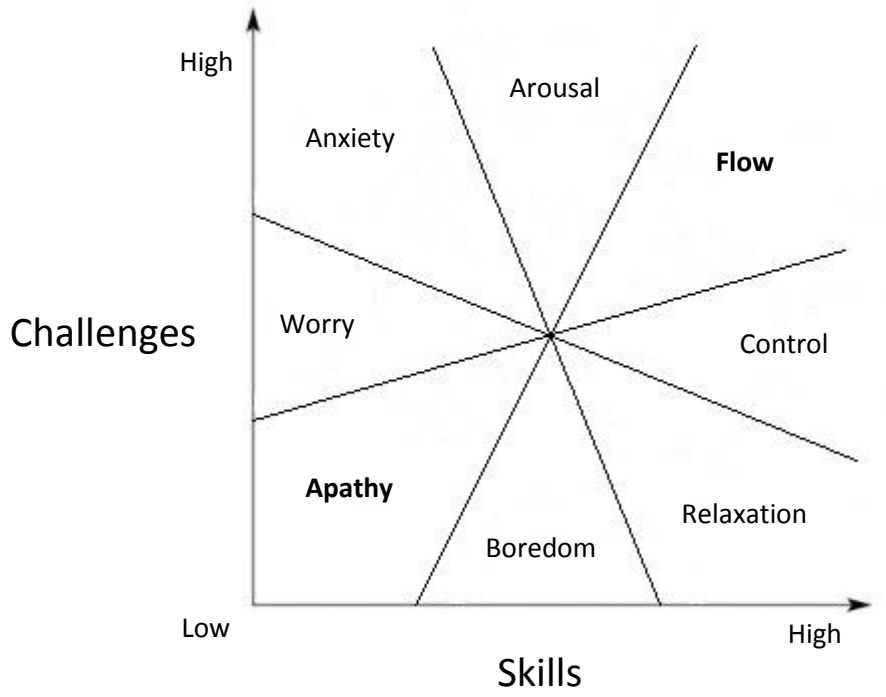
2.2 Flow

The term "flow" is described by (Quinn, 2005, p. 610) as a "subjective experience in which people report performing their best". This is supported in the field of psychology, where it is stated that flow can lead to higher individual performance due to inner motivation (Svartdal, n.d.). The state of flow is understood as the optimal experience and to be able to reach this optimal experience there must be a special composition of challenges and skills (Csikszentmihalyi, 1990).

According to (Knudsen, 2012, p. 48) "a good work rhythm is conductive to the mental state of flow – flow is a result of – among others – being in a good rhythm". By this it is not provided that all rhythms are good rhythms or successful ones, but that good rhythms are the ones causing flow. In an individual perspective, the personal adaption might not be in accordance with the group or organisation. The individual might struggle to adapt to the rhythms of the group and organisation. This is especially a challenge in working environments which revolves around knowledge intensive work. The management must make sure that both individuals and groups find a good work rhythm and flow. Different individuals have different optimal rhythms for achieving flow and this complicates the ability to achieve a good collective group rhythm (Knudsen, 2012). Flow is a condition that is experienced individually, but it is possible for individuals to find flow together, known as "collective flow" (Knudsen, 2012).

2.2.1 The flow model

Nakamura and Csikszentmihalyi (2002) have described a model linking the individually perceived level of challenges and skills to flow, figure 1. The model shows how different combinations of challenges and skills may lead to several different states including; flow, control, relaxation, boredom, apathy, worry, anxiety and arousal. According to this model, flow is experienced when the level of both challenges and skills are maximal. The flow experience is opposite to the experience of apathy. Apathy is experienced when the level of both challenges and skills are minimum (Nakamura & Csikszentmihalyi, 2002).



Figur 1: Model of the flow states

Source: Modified from Csikszentmihalyi (1997)

Challenges and skills are tightly correlated as skills are developed through overcoming challenges. The experience of flow is therefore dependent on that those challenges and skills develop simultaneously (Nakamura & Csikszentmihalyi, 2002). Challenges and skills are important factors to be able to achieve flow, but flow is also a result of people pursuing activities that gives them joy.

2.2.2 Enjoyment and positive experience

A person's ability to find flow is linked to the concept of enjoyment and positive experience (Csikszentmihalyi, 1990). Enjoyment is a positive feeling individuals get when accomplishing something. The concept of enjoyment has nine major components and the combination of these leads to a great sense of enjoyment (Csikszentmihalyi, 1990). These components are explained below.

The first component is that a challenging activity requires skills. The composition challenging activity and skills is intended to create enjoyment and flow for the person who performs it. The second component is the merging of action and awareness. When workers are in flow, the activity gets the workers full attention and all skills are concentrated on the situation. The

third component is clear goals. In order to be in flow, workers needs to know the goals related to the activity and they are a prerequisite for enjoying the activity. The fourth component is immediate feedback. The feedback needs to be related to the goal and give information of whether the goal is achieved or not. The fifth component is concentration on the task at hand. People in flow have the ability to ignore all information that is perceived as irrelevant for the activity and only concentrate on the task at hand. Thoughts and worries surrounding other aspects of life that normally could cause distraction will not hinder the activity. The sixth component is the paradox of control. Having control of the situation is associated with being in flow. People in flow have a good sense of control because their level of skills are developed and adapted to the activity and the risk of error is therefore very small. The seventh component is the loss of self-consciousness. The flow activity is so overwhelming that people lose focus of "their own self". There is little chance for people in flow to think about their own lives because the focus is on the task at hand. The eight component is the transformation of time. People in flow have a tendency to lose the notion of time. The rhythms of the activity exceed the normal daily rhythms determined by the time. The flow activities are independent of time and it is the activities that decide the pace which again leads to a feeling of freedom from the time. The last component is the autotelic experience. The autotelic experience is a condition where the activity itself and the performance of it is the reward. The focus is on the joy of performing the activity itself, not on the potential benefit of the activity. Thoughts associated with negativity and problems are replaced with positivity, sense of achievement and control.

2.3 Temperamental job-fit

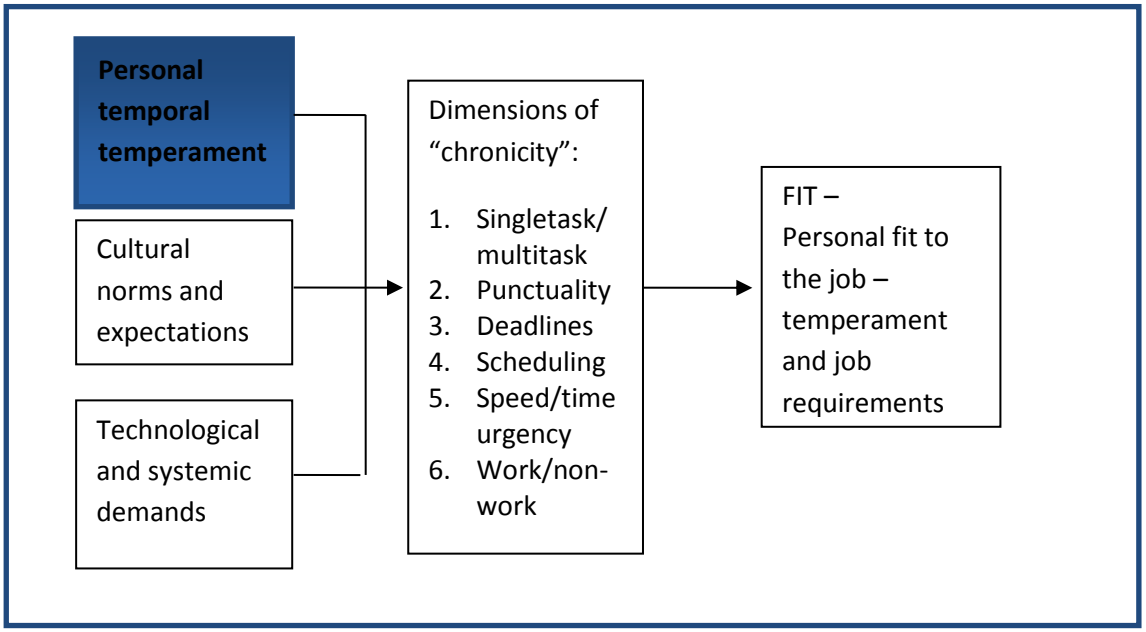
Temperamental job-fit is the “fit between personal dispositions and organizational requirements” (Knudsen, 2012, p. 8). Temperamental job-fit is present when there is a match or fit between personal abilities, the environment, job characteristics and job demand (Edwards, 1990; Knudsen, 2012). A strong degree of fit increases job motivation, satisfaction, involvement, performance and being on time. As a result, good fit provide a good effect on both individuals and organisation (Edwards, 1990).

Temperamental job-fit is important for organisations to achieve normal or above normal performance (Pérez-Nordtvedt et al. (2008). Misfit may lead to ineffectiveness and reduce performance for both the organisation and individuals (Pérez-Nordtvedt et al., 2008). Additionally, it is assumed that high degree of temperamental job-fit leads to good rhythm which further leads to good flow (Knudsen, 2012).

When organisations are able to predict certain behaviour in specified contexts and environments, they can then both affect and predict how a person would behave or respond in different situations. This may help organisations to predict how temperamental job-fit or misfit can affect workers, innovation opportunities, agility or efficiency (Knudsen, 2012).

2.3.1 Model of temperamental job-fit

Knudsen (2012) have explained some factors that are important to achieve a good temperamental job-fit and a high degree of rhythm and flow. These dimensions are called "chronicity" dimensions and some of these are multitasking, single tasking, punctuality, deadlines, schedules, speed and flexible work hours. Figure 2 illustrates the relationship between personal, cultural and technological expectations, the chronicity dimensions and temperamental job fit and job requirements (Edwards, 1990; Knudsen, 2012). When these match, Knudsen (2012) states that flow may be predicted when the level of fit between organisational demands and requirements are balanced with employees personal preferences.



Figur 2: Dimensions of personal temperament and job-fit

Source: Knudsen (2012, p. 17)

In this thesis, we have examined some of the mentioned "chronicity" dimensions for the analysis of project Alpha. The dimensions that were chosen were:

1. multitasking
2. tempo
3. deadlines
4. scheduling and planning
5. punctuality
6. work time and non-work time

These dimension are understood to be directly related to temperamental job-fit, flow and rhythms (Knudsen, 2012). We could also have included other dimensions, but the number of items chosen had to be restricted due to time and resource limitations. Deadlines, punctuality, tight schedules, multitasking, high degree of urgency and work load are in this thesis understood as different dimensions, even though they are closely related in the modern work situation (Knudsen, 2012). A description of these dimensions follows.

The first dimension is multitasking. Multitasking is defined as a high degree of relation and a rapid switch among activities, tasks or people at random times or in specific time periods (Knudsen, 2012). When multitasking, it is normal with a high degree of involvement with other people without predetermined appointments and that people not are sensitive of being disturbed or disturbing others. It is also accepted that tasks are completed at an adequate level of quality relative to the time limit or schedules that are determined (Hall, 1984 in Knudsen, 2012).

The next dimension is tempo and is often linked to organisation culture and demands. Due to time urgency, some industries or organisations have a higher interest to meet deadlines or to achieve more in less time. Some workers may prefer to work under stress, which make them perform better while other workers do not. In some cultures "faster means better" and can be related to an economic perspective where efficiency is linked to profitability (Adam, 1995). In this thesis, tempo is related to temperamental job-fit when it comes to how personal preferences are regarding time pressure and working hours (Knudsen, 2012).

The third dimension is scheduling and planning. Scheduling is a detailed plan which explains and outline what to do at certain times and occasionally also how to do the work. Scheduling and tight planning are for many necessary for getting the work done (Knudsen, 2012).

The fourth dimension is punctuality. This deals with workers preferences and attitudes of being on time or not. This is therefore tightly correlated with organisations culture, norms and demands, and the nature of the work (Knudsen, 2012).

Another dimension is deadlines, which is the time that is specified for a project or task to be completed. Deadlines can be either during or at the end of a project. This means that workers do not necessarily have to follow a fixed and detailed schedule, as long as the deadline is met (Knudsen, 2012). However, if the deadline is set to short or too long, this can interfere with the work rhythm and motivation to meet the deadline. Whether or not objectives are reached within the deadline can be used as an indicator of success.

The last dimension is work time and non-work time which involves regular work hours and flexibility in work hours. In recent years the flexibility of working time has increased in many occupations. The introduction of flexible work hours and work rhythms has created changes and challenges in people's personal lives and what organisations demands from the workers. Workers therefore spend more time trying to adapt their flexible work time to their personal time (Adam, 1995).However, in some organisation cultures or industries there is not a clear distinction between being at work or off-work and long working hours is in many industries a solution to the demand of 24/7 society. Another solution for getting the work done is for workers to work day and night shifts (Knudsen, 2012).

2.4 Time

In this section we are presenting time viewed from an organisational perspective. In many situations time is a decisive factor for how organisations operates as it sets guidelines in relation to schedules, deadlines and coordination of work tasks (Adam, 1995).

2.4.1 Time economy

"Time is money" is a well-known term. By this, time is considered as an important resource in an economic perspective; therefore time is as an economic variable and needs to be handled thereafter. This is known as "time economy" (Adam, 1995, p. 100).

Time and speed can be perceived differently depending on norms and cultures. The Western culture has a tendency to push for things to go faster and the faster the better, while other cultures may view speed as a negative quality (Adam, 1995). Time economy and the benefit of speed in the cycle of investment-return-profit is the decisive factor that ultimately favourites speed in the Western culture (Adam, 1995).

2.4.2 Social construction of time

Zucchermaglio and Talamo (2000) placed the time issue in an organisational context and investigated how a specific project group handled time in meetings. They found that the first meeting was very important. The members of the work group spent a lot of time discussing the time issue and planning in the first meeting. They also found that group members shared the view of wasted time and wanted to avoid wasting time e.g. by distributing work and by meeting prepared for the next meeting. The next meeting would then consist of discussions and interactions that brought the project forward (Zucchermaglio & Talamo, 2000).

2.4.3 Temporal structuring

Time can be perceived and handled in different ways in organisations. Temporal structuring is by Orlikowski and Yates (2002, p. 684) described "as a way of understanding and studying time as an enacted phenomenon within organisations". They present time as a decisive factor for how people's experience relate to organisational life. Humans are involved in shaping these temporal structures, but the temporal structures are also shaping the humans.

Temporal structures are a ways of coordinating and plan time in organisations, for instance by using a schedule (Orlikowski & Yates, 2002). These temporal structures are commonly known and are important factors that help organising the activities in organisations. They help people form rhythm and structure in the work. Understanding and using temporal structures will help us to get control over the use of time and achieve effectiveness.

2.5 Interaction and communication

This section reviews how interaction and communication in an organisation is influencing the employees. Elements that enhance interactions are also presented.

Interactions happen when someone takes the initiative to contact and receive response (Knudsen, 2012). Knudsen (2012) refers to Poynton (2008) which explains dynamic interaction as initiatives leading to responses and then serves as new initiatives. Dynamic interactions can occur virtual or face to face and by using different types of communication.

2.5.1 Disturbing and supportive interactions

When interactions occur, these could be experienced as either disturbing or supportive. If the initiator tries to interact with a co-worker deeply concentrated with work, then the interaction may be perceived as disturbing for the co-worker. On the other hand, if the initiator helped the co-worker in his work, then the interaction might have been perceived as supportive for the

co-worker. Interactions may affect the individual's ability to achieve flow at work. If the initiative to interaction is perceived as disturbing, the individual can lose flow. However, if the initiative to interaction is perceived as supportive, the interaction can help the individuals achieving flow.

Constant interruptions between co-workers can prevent them from completing their work tasks (Perlow, 1999). Disturbing interactions can be prevented by introducing "interaction time" and "quiet time". Interaction time is a set time on the day when interactions are encouraged, while quiet time is a set time of the day where there are no interactions and the workers have the ability to work uninterrupted. In a study performed by Perlow (1999), she found that workers felt that they performed better when having quiet time. They also became more aware of the negative effect unwanted interruptions could have on their work (Perlow, 1999).

2.5.2 Interaction competence

Interaction competence is linked to the quality of interactions and this competence is believed to enhance interactions. Knudsen and Mydland (2013) have through analysing a case from Statoil, identified five prime indicators of interaction competence:

1. To be an effective communicator: When being an effective communicator one is able to cope with various personalities and situations. Regardless of what medium that is being used, the information given is clear and understandable for everyone involved.

2. To have a "dialogical capability": The dialogical capability characterises the initiators interpersonal communication skills. It is "the ability to relate (use first name), respond, give affirmations, question, probe, confirm" Knudsen and Mydland (2013, p. 188).

3. By being "self-organised": When being self-organised one sees opportunities and pursues interaction. It is important that leaders communicate and delegate work, but at the same time the workers cannot be passive. The workers must take initiative and responsibility.

4. "Real-time self-coordination": This indicator involves interaction with fellow co-workers on its own initiative without delegation from the leader. Work often requires extensive collaboration between co-workers.

5. Being “self-synchronised”: This indicator applies to the previously mentioned difference between supportive and disruptive interaction. A self-synchronised person has a well-adapted timing for when an interaction is beneficial. The interactions will therefore be enhanced and perceived as supportive and not disruptive. One of the reasons why individuals can be self-synchronised is because they have a good "rhythmic feel". These signals can be both conscious and unconscious, and is the individuals’ impulse and timing of interaction.

2.6 Organisational structure

The structure of an organisation is the overall plan for the communication and managerial control. In this section we will present three different approaches to organisational structure. These are; mechanistic structure, organic structure and semistructure.

2.6.1 Mechanistic structure and organic structure

Burns and Stalker (1994) provide a thorough explanation of two types of management systems: mechanistic systems and organic systems. From now on these systems are referred to as structures.

Mechanistic structure is best suited for organisations with stable conditions. The structure is hierarchical. Communication, authority and control are delegated from the top of the hierarchy. Further, knowledge and decision making is located at the top of the hierarchy and superiors are controlling and guiding the operations. The interactions also have a tendency to be to be vertical (Burns & Stalker, 1994).

However, when an organisation has changing conditions, the organic structure is preferred (Burns & Stalker, 1994). This structure is characterised as flat. Within this structure everyone in the organisation can contribute with knowledge and also interactions between workers irrespective of positions and tasks are emphasised. Mutual communication rather than command is valued in this structure. The communication is generally lateral and open with focus on the ability to help and guide each other. Which level the different workers are situated, is decides by expertise and experience and the structure chooses position of its leading characters by consensus. It is required by these characters that they have competence and knowledge. Burns and Stalker (1994) observed that commitment to the organisation is larger in the organic structures than in the mechanistic structures. Within the organic structure

there also exists shared understanding of fundamental principles, and it is believed that these understandings will help to manage the structure (Burns & Stalker, 1994).

According to Burns and Stalker (1994) no management structure is optimal and organisations can function with a structure that consists of both mechanistic and organic elements. This is what Brown and Eisenhardt (1997) have defined as semistructure.

2.6.2 Semistructure

The semistructure is a structure which includes both mechanistic and organic elements and is suggested for organisations in continuous change Brown and Eisenhardt (1997). The semistructured organisation is neither highly structured nor highly unstructured. In certain areas an organisation is bound by rules and regulations and must adhere to schedules and deadlines while in other areas it is up to the organisation itself to decide how things should be done (Brown & Eisenhardt, 1997). A semistructure makes it easier to conduct changes in an organisation. This is because the semistructure is neither too mechanistic so that a change is difficult to push through nor too organic that a change is difficult to organise. However, in order to be able to maintain a semistructured organisation with the correct balance between mechanistic and organic structure, a strict managerial understanding of the organisation is required (Brown & Eisenhardt, 1997). There exist several variations and combinations of semistructures (Knudsen & Mydland, 2013). Organisations have different challenges and needs and may choose elements of the organic structure and elements of the mechanic structure that they believe fit their situation best (Knudsen & Mydland, 2013). In this way the organisations will get unique and individual adapted semistructures that meet their individual needs. A study of different organisations would most likely reveal various combinations of semistructures.

2.7 Project success

In this section we will present various and somewhat contradictory views regarding project success and indicators leading to project success.

A project is a temporary composition of people which possess different knowledge and are working together towards a specific objective (Pinto & Sleving, 1988). Projects are characterised by having specified beginning and end dates, a limited budget, challenging operational activities and predetermined goals (Pinto & Sleving, 1988). The outcome of projects is normally characterised as success or failure, and this is determined by whether or not they have achieved their predetermined objectives (De Wit, 1988).

2.7.1 Indicators of project success

Several indicators can be used to measure project success. A project can be seen as successful if it manages to keep to deadlines, comply with the cost limits and maintain quality or if stakeholders are satisfied with the end product.

The most important contributors to project success are quality, stakeholders, coordination and communication patterns (Baker, Murphy, & Fisher, 1988). Research has identified a positive correlation between time and success and costs and success, but there were other elements with higher correlation (Baker et al., 1988). "Frequent feedback from the parent organisation, organisation structure suited to the project team, parent enthusiasm and lack of excessive government red tape" are factors that are more important than time and costs. In addition it is important that a project is effectively planned and has a competent project manager (Baker et al., 1988, p. 905). One must also take into account the time horizon. In many cases regarding project success it is important to distinguish between short term and long term perspective. Projects have proven to be successful in the long term despite cost overruns and time delays (Shenhar et al., 2001).

2.7.2 Time, costs and quality

Traditional literature perceives projects as successful when they are completed on time, have complied with the budget and fulfilled the quality requirements (De Wit, 1988; Lim & Mohamed, 1999; Munns & Bjeirmi, 1996; Shenhar et al., 2001). According to Heidenreich (1988), a project is successful when there is a balance between the three indicators. This balance is maintained through frequent monitoring of the different elements and feedback to top management throughout the project period.

Time, costs and quality are equally important. If the top management of a project is focusing on achieving only one or two of these elements then deficient focus on the other can result in project failure (Heidenreich, 1988). According to Avots (1984), the importance of costs, quality and time depends on the project phase. In the beginning of the project, time is more important than costs and quality. As the project progresses, costs takes over as the most important element. When the project is finished, quality is of greatest importance (Avots, 1984). While time and costs are concrete measures of success, quality appears to be less distinct. The general perception of quality is that the product or service is suitable for use or meets all requirements. Substantial resources on planning and control are necessary for a project to achieve the desired quality (Heidenreich, 1988).

The literature shows different views on project success. People are different and they have different perceptions of success (Shenhar et al., 2001). There are many stakeholders involved in a project and because they have personal expectations they are also likely to have different views on the end product (Munns & Bjeirmi, 1996).

2.8 Conceptual framework

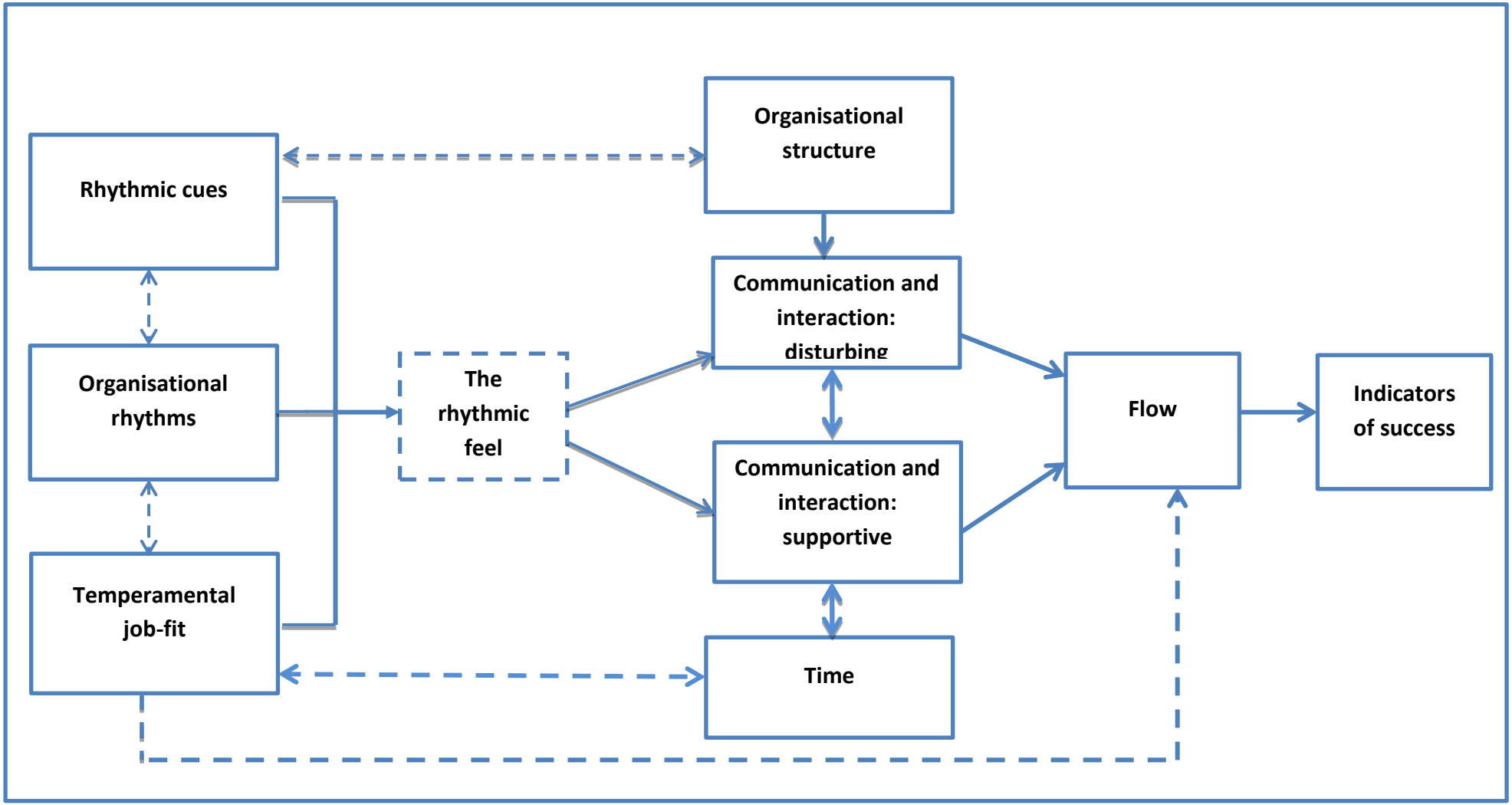
Based on the literature review, we developed a conceptual framework, see figure 3. This framework presents how the theoretical concepts are related to each other based on the literature review.

Organisational rhythms, rhythmic cues and temperamental job-fit form the basis of the conceptual framework, and these factors mutually affect each other. Different organisations have different rhythms, and these rhythms are set by various internal and external cues. The dimensions in temperamental job-fit can according to theory affect rhythm and flow. Temperamental job-fit can in some cases lead directly to flow. All three concepts are bounded together by the rhythmic feel. The rhythmic feel can affect the communication and interaction, and can determine whether the interaction is experienced as supportive or disruptive. Supporting interactions can lead to flow, while disruptive interactions can make people lose flow.

The rhythmic cues are influencing and being influenced by the organisational structure. The organisational structure is decisive for the communication and interaction in the organisation. These factors are dependent on either being coordinated from the management, or adapted through mutual adaption. Time sets guidelines in relation to schedules and deadlines, which are dimensions of temperamental job-fit, where time and temperamental job-fit are influencing each other. Time is also influencing interactions and coordination of work tasks.

The final outcome of this model is the indicators of success. According to theory, flow leads to a better performance for the organisation and performance further affects the level of success.

In this thesis we have investigated whether the relations between the different theoretical concepts can be identified in project Alpha, and whether they had any impact on the level of success.



Figur 3: Conceptual framework

3. Research methods

In this chapter, different methodical approaches will be presented and argued for, including justification for the choices that were made. The choice of method and the conducted interviews lays the foundation for the results in chapter 4 and analysis in chapter 5.

The aim of this thesis was to study work rhythms in project Alpha. We wanted to look into which factors that sets work rhythms and examine whether these work rhythms could lead to flow and successfulness in project Alpha. Through in depth interviews we expected to gain a deeper understanding of this phenomenon. Background for the interviews and how they were carried out are explained in the following sections.

3.1 Nor-Oil and project Alpha

In this section we will present the case study. The interviews in this case study were anonymous; therefore the names used in this thesis are fictional. We chose to name the project "project Alpha" and the organisation was named "Nor-Oil". Nor-Oil was a part of a project organisation that was responsible for implementing project Alpha. The project organisation consists of the owner of the rig, the renter and numerous suppliers like Nor-Oil. The information about the organisation was retrieved from organisation's homepage, articles and information provided by the CEO and two leaders in Nor-Oil.

3.1.1 Nor-Oil

Nor-Oil is part of an industrial group and their core activities are to be a supplier to the petroleum industry. Nor-Oil's main objective is to deliver technical solutions combined with system integrated products and services. Nor-Oil was newly founded by people that had many years' experience from this industry**.** Since the start, Nor-Oil has grown rapidly mostly through acquisitions. In 2013 they had 650 employees and an expected turnover of NOK 1.5 billion (Norwegian mrd.).

Nor-Oil has been working on the project studied in this thesis for approximately one year, this is called project Alpha.

3.1.2 Project Alpha

For Nor-Oil, project Alpha involved engineering, planning and installation of electrical equipment on a rig to be used in the oil industry. Previously this rig had been used in another context and in another part of the world, and therefore needed to be upgraded to satisfy its new tasks. The rig is owned by one organisation. The subsidiary of this organisation is the one in charge and serve as "the owner" or "the customer", while it is rented out to a third organisation that is going to be the operator of the rig.

Another organisation in the same industrial group as Nor-Oil is the contract owner and several of the companies in this industrial group are working on project Alpha. However, this case study is only focusing on Nor-Oil's part in project Alpha.

The relationship between Nor-Oil and the customer was demanding. Nor-Oil had not worked for this customer before and they perceived that there were traces of conflicts of interest.

Nor-Oil became familiar with project Alpha in the spring of 2012 and started the preliminary project that summer. The actual implementation of the project was planned to be performed during 8 weeks on a location in Norway. The deadline for the completion was initially set to November 2012, and the operator planned to start using the rig in December. However, the project start was delayed several times, which led to that the completion date also was postponed.

Before project Alpha could start, the rig was transported to the project location in Norway. Nor-Oil was present and performed some work during this transportation. When arriving on location in Norway, it became clear that the rig needed preparations to meet the required Acknowledgement of Compliance [AoC] and approval to be used in Norway. This meant that Nor-Oil had to do a lot of work in addition to what the original contract stated, and the scope of their work increased tremendously. Because of these preparations their original work was postponed several times and Nor-Oil got the go-ahead to start working at the rig in February 2013. The project was finished within the new deadline in April 2013, five months later than originally planned. The AoC was the main reason that the implementation of the project was delayed.

Project Alpha was by far the largest and most complex project Nor-Oil had ever had. They had never done this type of work before and the project increased significantly in scope from the original plan, this lead to tremendous increase in organisation and number of staff. The

cost framework was initially set to NOK 180 million, but at the end of the project it was estimated to approximately NOK 380 million, a cost overrun of NOK 200 million. Because of the short time between the start-up date and the signing of the contract, it was agreed to save time by performing planning of engineering and construction simultaneously.

Throughout project Alpha the employees of Nor-Oil was under great stress. The increase in scope led to pressure on time, costs, quality, delays and overruns. Nor-Oil discovered that they did not have the systems they needed to implement a project of this scope and that they did not have time to implement those systems along the way. Project Alpha therefore becomes more unstructured and chaotic than needed.

Because of the increase in scope, a large number of the employees were contract workers from other companies. Both installers and people in central positions with responsibility were hired as contract workers. Nor-Oil perceived this as a burden, since they continually had to deal with persons that did not have any affiliation to the organisation. It was also believed that contract workers had an agenda. The question of loyalty became very complicated in the project. In addition, they also experienced problems with poor functioning parcel owners. In this context, a parcel is the specific assignment that includes one or several specific work tasks that has to be completed to achieve the objective. This means that each parcel owner had responsible for their own parcel or section on the rig.

The work on the rig was performed in two overlapping shifts by technical installers. One shift worked twelve hours day shift and the other worked twelve hours night shift. Each time the shifts switched there was a handover meeting that lasted 1 hour. This meeting was very important and information on what had been done and what should be done was informed from the outgoing shift to the ongoing shift. People that had other work tasks in the project had different working hours and some could also in periods work from other locations. Some worked regular hours from Monday to Friday at their usual office, while other e.g. worked fourteen days on project location and then had fourteen days off. There were also those who could decide on their own working hours and in periods worked from 7AM to 7PM. People that had other work tasks than installation generally worked more at the end of the project than in earlier phases.

From this presentation it is understandable that project Alpha was an interesting case study for this research.

3.2 Grounded theory and traditional scientific research method

Research may be carried out in different ways. In this thesis a combination of "grounded theory" and "traditional scientific research method" were relevant methods to use. The main difference between these two approaches are whether theory comes before research or research before theory (Ghauri & Grønhaug, 2005).

Grounded theory is used when little or none information exists regarding the phenomenon that is studied, and is applicable in highly dynamic situations (Eisenhardt, 1989; Zikmund, Babin, Carr, & Griffin, 2010). The aim is to build a foundation for new theory from case study research (Eisenhardt, 1989). The process of data collection and analysis takes place simultaneously, where theory and data constantly are compared. Hypotheses are constructed based on information from the collected data (Eisenhardt, 1989; Zikmund et al., 2010).

The basis of traditional scientific research is to test existing theory. This is achieved by first collecting existing literature, and then conducting an empirical study. The results are then analysed and evaluated before conclusions are drawn. The conclusion can either support or reject existing theory and previous research (Ghauri & Grønhaug, 2005; Jacobsen, 2005; Zikmund et al., 2010).

We wanted to combine different existing theories and terminologies and apply these by examine project Alpha. The structure of "traditional scientific research method" was used, because literature were collected and used as a foundation for the conduction of the case study. While "grounded theory" is used since the purpose of this thesis is to form an understanding and insight of work rhythm, flow and success in project Alpha.

3.3 Research question

In the introduction, we stated that the aim of this thesis is to identify factors setting work rhythms in a project, and whether these rhythms could lead to flow and a successful project outcome. We therefore arrived at this specific research question:

What factors sets the work rhythm and how does the work rhythm influence flow and level of success?

The requirements for a research question is that it is engaging, simple and give some contribution to the field (Jacobsen, 2005). We believed that our research question is engaging and appealing since this is a topic we are interested in and we could identify with because of our experience from daily life and as students. Since the research question had to be simple and not too complex and extensive, it was limited to specifically cover work rhythms, flow and success.

3.4 Research design

To ensure that information was relevant to answer the research question, we had to assure that we used a relevant research design. The research design describes relevant methods and procedures for collecting and analysing data (Zikmund et al., 2010). The research design varies depending on the type of research question (Jacobsen, 2005). The research design contributes to discover information that helps to solve the research problem in the best way given the limitations of the research (Ghauri & Grønhaug, 2005; Jacobsen, 2005).

A research questions can be explored through a causal, descriptive or exploratory design. In this thesis a descriptive design was chosen, since we considered it to be most appropriate to examine the research question.

Descriptive design describe characteristics of a specific situation "by addressing who, what, when, and how questions" (Zikmund et al., 2010, p. 55). Additionally, the research question should be well structured and understood (Ghauri & Grønhaug, 2005). After the researcher has gained an understanding of the situation, a study is carried out (Zikmund et al., 2010).

A descriptive design was used because the research question had a good structure and was well understood in the way it tried to describe the relevance of work rhythm, flow and level of success in a specific project. The phenomenon is addressed by studying project Alpha at one single point, due to time and resource limitations. Various divisions of project Alpha and

workers with various responsibilities was sampled and interviewed at one single moment of the project.

3.5 Qualitative approach

How to conduct a study vary based on the type of data needed for approaching the research question (Ghauri & Grønhaug, 2005). A research question can be approached using quantitative or qualitative method, or both. These two methods differs when it comes to the procedure of data collection, units, analysis and conclusion and the ability to generalise your findings, while the interpretation of results is similar (Ghauri & Grønhaug, 2005; Jacobsen, 2005). While the quantitative approach is based on scales and numeric values, the qualitative approach is using words to describe the phenomenon (Jacobsen, 2005).

A qualitative approach is applicable when the researcher wishes to go in depth and investigate fewer samples to gain an understanding of how the respondents interpret and understand a given situation. This leads to a more nuanced description of the phenomenon to be studied, however it can be difficult to generalise the findings (Ghauri & Grønhaug, 2005; Jacobsen, 2005; Zikmund et al., 2010). We chose a qualitative approach since we wanted to gain a deeper understanding of the phenomenon of work rhythms and flow, and to see if this affected the level of success in project Alpha.

3.6 Case study research

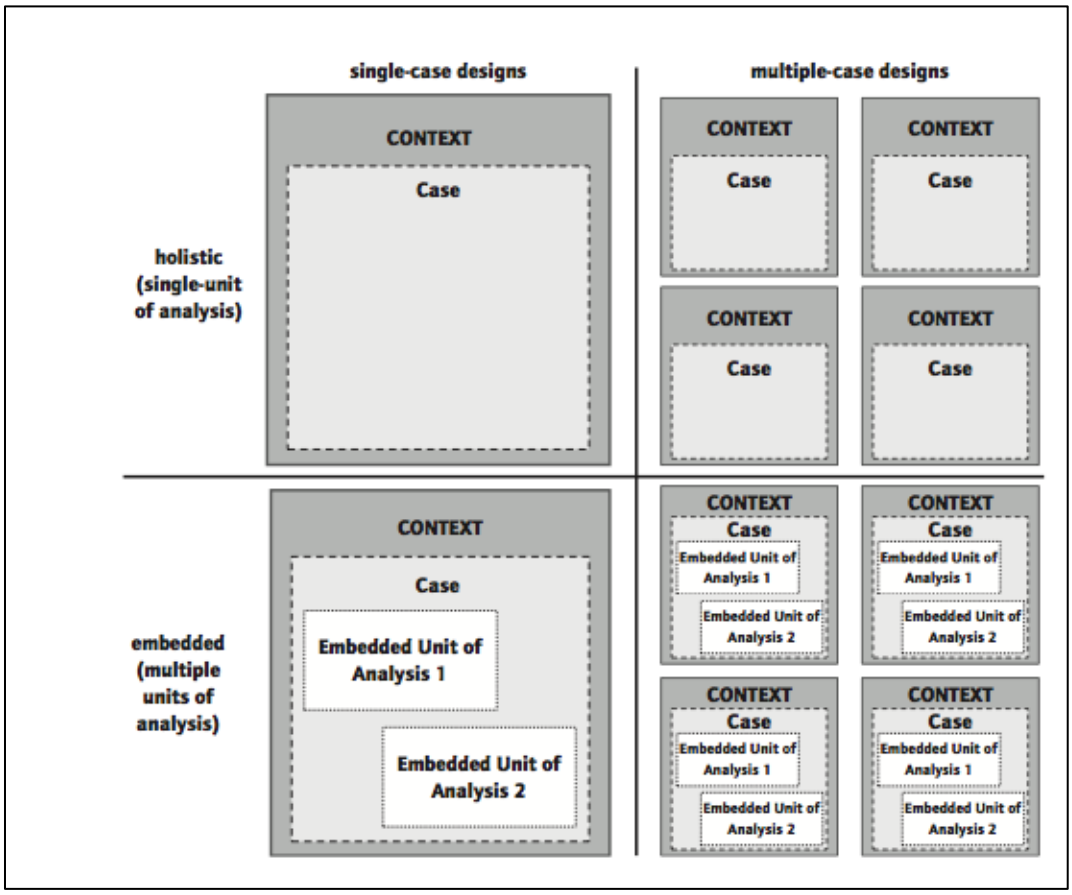
There exist many categories and techniques within qualitative research (Zikmund et al., 2010). Based on the chosen methodology used in this thesis and the research question, a case study was considered as a particularly relevant approach to the research question.

A case study is a study of a phenomenon within a specific natural, real-life situation, where one strives to understand the context and dynamics of the phenomenon. A typical example is projects (Jacobsen, 2005; Yin, 2009; Zikmund et al., 2010).

The purpose of this thesis was to describe the phenomenon of work rhythm and flow in a specific situation. We hoped to gain more and deeper understanding of the phenomenon without necessarily generalise it to a population. We considered that the best approach to this phenomenon would be to use real-life examples to gain understating of the phenomenon in a specific situation. A case study approach was therefore understood as suitable in this thesis. A case study approach is also typically applied when descriptive design is used (Jacobsen, 2005).

When deciding upon a case, the process started with a meeting with Nor-Oil. Those who attended this meeting were the CEO of Nor-Oil, the supervisor and one of the authors. The aim of the meeting was to introduce the research question, and to see whether this might be of interest for Nor-Oil. The CEO agreed on a focus on work rhythms, flow and success. During this meeting, the CEO introduced our supervisor and one of the authors to "Project Alpha".

After we decided to use a case study approach, we had to determine which case study design that was most relevant to gain more insight into the phenomenon that we wanted to study. A framework developed by COSMOS Corporation illustrates four types of case study designs (Yin, 2009), see figure 4. These are single-case holistic design (type 1), single-case embedded design (type 2), multiple-case holistic design (type 3) and multiple-case embedded design (type 4). The main difference between these four types is that a case study can include single or multiple cases and single or multiple units of analysis (Yin, 2009). From the dotted lines, the matrix also illustrates that it is not necessary a direct relation between the case and the contextual conditions that one often wishes to relate the case to (Yin, 2009).



Figur 4: Basic types of design for case studies

Source: Yin (2009, p. 46)

This study consists of one case study (project Alpha) with single-unit analysis and is therefore type 1, single-case holistic design. Due to limitations in time and resources, only one company and project could be explored. By conducting a single-case study we hoped to get a better perspective of the context of work rhythms and flow in project Alpha.

3.7 Sampling method and data collection

After determining to use a single-case design with multiple units of analysis, we had to determine which sampling method that was best suited to answer the research question. First, we had to choose between using primary and/or secondary data. This thesis use both primary and secondary data. Primary data is data which we gathered from the original source and is tailored for this specific study and research question. Secondary data is data collected and recorded by someone else and for another purpose than this study (Zikmund et al., 2010).

During the literature study, we used secondary data. This gave us insight and more knowledge of subjects and information that was relevant to explore the theoretical aspects of the research question. We believe the variety of sources and references make this thesis stronger and more robust. The literature was gathered from academic articles and books, mainly from the university library and academic journals from online databases such as EbscoHost and Science Direct. Most of the academic articles and books are published by Elsevier, Emerald or Sage. The keywords which were used to acquire this information were the name of the different theoretical concepts. We also placed these next to each other in the search field to find articles including and mixing the different terms. The reference lists in articles were also useful to find relevant articles on the specific subjects.

The primary data of this thesis was a case study which we conducted by interviewing five respondents in project Alpha. This case study was used to hopefully gain a better understanding and real-life examples of how theoretical concepts could be applicable in this specific project, and how they might influence the level of success. A detailed description of this research process follows.

3.7.1 Open, individual interviews and the interview process

Within qualitative method several sampling methods can be used. These are open, individual interviews, group interviews, observations and document surveys (Jacobsen, 2005). We chose to use open individual interview with each of the five respondents. This was seen as the best approach for this thesis. Group interviews and observations were not performed due to time limits. By carrying out open, individual interviews it was possible to compare the

respondent's personal opinions regarding work rhythms and flow with what they were actually doing in a real-life situation. Such a comparison may be used to get a better overview of the reality. Interviews are also considered as good and important sources of data collection for case studies (Ghauri & Grønhaug, 2005; Yin, 2009).

The structure of the interviews decides whether they should be by mail, phone or in person and the interviews can be divided into structured, unstructured or semi-structured interviews (Ghauri & Grønhaug, 2005; Jacobsen, 2005). We chose to use open, semi-structured interviews and interviewed the respondents in person, since this was a comprehensive case with many nuances and details. By doing so, we believed the interaction with the respondents was better, and it was more natural to ask unstructured follow-up questions when necessary. In semi-structured interviews the topic and sections, sample size, respondents and the open-ended questions are determined beforehand, while the answers of the respondents and the supplementary questions are not set in advance (Ghauri & Grønhaug, 2005; Zikmund et al., 2010). The conducted interviews appeared as conversation, with few limitations to the respondent. This required that we had a good understanding of what information that we sought. Semi structured interviews were also relevant since we were interested in what each individual had to say and their perception of the specific phenomenon of work rhythms and flow in project Alpha. Seeing how the respondents reacted to the questions and topics could also be important for the process of analysing and interpreting the results.

3.7.2 Interview guide

Furthermore we developed an interview guide which included sections and structured questions. These sections and questions clarifies the problem that are addressed in the research question and which were understood as relevant to be able to answer the research question, see attachment 2 in the appendix. To make sure the interview guide was well formulated and included all necessary aspects, we developed it in collaboration with our supervisor. When the interview guide was finished, it was sent to be approved by the CEO at Nor-Oil. The interview guide started with an introduction of the purpose of the interview and then some general background of the respondents including responsibilities and work tasks in project Alpha. The rest of the interview guide followed the theoretical concepts in opposite order than the literature review: indicators of success, time and flow, communication and interaction, personal temperamental job-fit, organisational structure, rhythmic cues, organisational rhythms.

The interview guide was written in Norwegian and for writing this thesis, it was also translated into English. The interview guides is attached in appendix 2 and 3. We are aware that since the interviews took place in Norwegian and this thesis is written in English, information may have been lost or misunderstood due to cultural differences and that concept, phrases and expressions can not necessarily be translated directly. This may affect the interpretation of data. Nevertheless, we believed this was a good choice because when conducting the interviews in the respondents and our native language it could lead to better explanations and nuances in the answers and questions, since their vocabulary most likely are better in Norwegian.

To make sure that the questions were understandable and that we were able to explain the theoretical concepts and terminology, we pre-tested the questions on each other by using a hypothetical case. The pre-testing made it possible to practice and improved our interview technique skills before the actual interviews.

3.7.3 Sample size and sample units

Choosing the right population is a key element to get a good internal validity (Jacobsen, 2005). Internal validity exists if the results, conclusions and description of the phenomenon are believable (Ghauri & Grønhaug, 2005; Jacobsen, 2005). This means if the findings corresponds with what seems reasonable, if the findings are credible and authentic (Miles & Huberman, 1994). Because of the time limit of this thesis, only a small sample of the population involved in project Alpha was chosen. It was believed that three to four units with different responsibilities in project Alpha would be adequate to understand, gain insight, and create explanations that could contribute to gain nuanced description of work rhythm, flow and other relevant concepts. The CEO at Nor-Oil selected the sample size and sample units, this was therefore a nonprobability sampling method. Nonprobability sampling is when the respondents are selected based on for example personal judgement, convenience or appropriate characteristics of the respondent. This can lead to a systematic biased sample size (Jacobsen, 2005; Zikmund et al., 2010). The CEO selected five participants from project Alpha which we interviewed. The respondents had different roles and areas of responsibilities in project Alpha, which we believe can contribute to increase the internal validity. We do not know how the respondents were chosen, but it could have been based on personal judgement or convenience, on their level of responsibilities in project Alpha, and attitude towards an interview situation.

3.7.4 Interview situation

Prior to the interviews, we had an e-mail correspondence with the CEO where he informed us of time and date of the interviews and who the participants were. All the interviews were carried out in person in a meeting room in Nor-Oils office. Three of the interviews were at the first day and the other two at the second day. The interviews lasted approximately 1 hour and 15 minutes, while one interview was 2 hours long.

The interviews started with a short introduction of the interviewers and the purpose of this thesis and the interview. The use of tape recorder and the possibility of anonymity were also clarified. A tape-recorder was used so that the focus was on the respondents and their answers. Some notes were taken during the interview. All respondents accepted the use of tape-recorder and neither of them had the need to be anonymous, however the CEO later requested anonymity for the respondents, project Alpha and Nor-Oil. We did not perceive that the use of a tape-recorder made the respondents hesitate or not answer at all on the questions. However, they may have excluded information or examples, and this should be kept in mind. The respondents appeared to be interested in the topic. They answered freely and talked both positively and negatively about aspects of project Alpha. We therefore do not believe that the use of tape recorder had a large effect on the respondents.

After conducting the interviews, we wrote down important points and notes from the interviews, and what we observed during the interview situation. Since the tape recorder stopped for approximately 20 minutes under one of the interviews, we also had to write down what we remembered from this interview and make our notes clearer and more complete. Further, transcriptions from the tape recording were done in order to start the analysis.

3.8 Conducting the analysis

After gathering all information and material we analysed the data. The qualitative data analysis starts with transcribing the raw data. The backside with transcribing is that it takes long time, but on the other hand you get accurate and detailed information (Jacobsen, 2005). The data collection in this thesis was gathered through interviews. We felt it was important to prioritise to transcribe the data from the interviews in order to be sure we obtained all the information.

After transcribing the raw data, we made an overview of the results where we systematised and categorised the information from the respondents. We perceived some of the results to be more important than others. These findings were analysed and discussed and it made it possible to see the relationship between the different theoretical concepts. Conclusions were drawn based on the analysis.

4. Research results

In this chapter the research results will be presented. The results are divided into categories based on the interview guide, but are presented in the opposite order than the interviews were conducted. The research results are presented in the following order; organisational rhythms, rhythmic cues, temperamental fit, organisational structure, communication and interaction, time and flow, and indicators of success. The results in each category are described in detail, and from these results the major findings are presented and discussed in chapter 5.

The results are based on in-depth interviews with five employees in Nor-Oil, all of which were deeply involved in project Alpha. All the interviews took place during one week. Even though the respondents had worked on large projects previously, they had various levels of experience and they had different work tasks in project Alpha. Common to all of them are their background as electricians and that they are men. Two of the respondents had functions as leaders and the other three operated mainly as subordinates, while some of the respondents had different positions and responsibilities throughout this project. To not confuse the reader, the subordinates are referred to as engineer 1, engineer 2 and engineer 3, while the leaders are referred to as leader 1 and leader 2.

4.1 Rhythms

"I have no idea how the rhythm occurred", engineer 2.

The respondents were questioned how they perceived that work rhythm in project Alpha was set and how important this was for project Alpha. In general, there was a mutual understanding by the respondents that there was no special work rhythm in project Alpha. Engineer 3 believed there had not been any rhythm at all, just a flow, things just happened. He believed that Project Alpha had been the most chaotic project he had ever worked on, although he believed the work was very interesting and informative. Engineer 1 stated that the rhythm in the project certainly was not controlled or set from the management.

However, some of the respondents claimed that there could have been a rhythm down in the organisation. Engineer 3 stated that in a project like project Alpha, a noticeable rhythm would have been the frequency of meetings, which he believed would have been a good pace for project Alpha. This engineer did not participate in meetings due to chaos and lack of an updated organisational matrix. According to leader 1 the handover meetings affected the daily

rhythm of the project. He said that these meetings occurred twice a day and that they contributed to good rhythm and flow for the installers. According to leader 1, the installers and their leaders knew what they were doing due despite what happened higher up in the organisation. Leader 2 said meetings were important, especially in the start-up and end of projects. Leader 2 therefore saw meetings as an important management tool to set the work tasks into a system and to inform and communicate to everyone in project Alpha.

On the other hand, Engineer 2 explained that he did not know how the rhythm was set, but that the rhythm of project Alpha was something you just adopted either you wanted it or not.

"You just jumped on a train and you did not have a chance to leave before the project was done", engineer 2

Engineer 2 pointed out that the rhythm might stop for some time due to the amount of applications and approvals needed before they could do their work, especially at the end this had impact on the rhythm.

"The rhythm in the project wasn't good enough, but still we reached the aim of the project" , leader 1

Leader 1 believed that project Alpha would have had a better work rhythm and flow if project Alpha had the skilled workers it needed when the scope of the project increased. The rhythm could have increased if everyone had lived and worked at the location of the rig throughout the whole project stated engineer 3. However if that had been a demand, engineer 3 would not have been working in project alpha or for Nor-Oil.

Engineer 1 believed the social life at work and coordination with others in project Alpha felt naturally. Leader 1 did not mention this, and engineer 3 stated that the interaction between the workers did not participate to set a rhythm. However, he had good interaction and collaborated well with engineer 2 and two co-workers and this increased their internal rhythm. Engineer 2 said that it might be easier to find a good rhythm if the people you work with also are motivated in the same way, and everyone gives their best, even though the workdays are long. Engineer 2 stated that he always gets so engaged in work and work hard, so he do not think of it as a rhythm, but maybe it still was. Engineer 2 believed project Alpha was quite similar to other projects he had worked in, except for the high focus on safety since they were working on a rig.

4.2 Cues

We identified some rhythmic cues that could be important for the work rhythm of project Alpha. These were: commuting between work and home, working time, regularly week or day rhythm, time of meetings, attendance at meetings and importance of meetings. The respondents were asked how they perceived these different cues, and how important these were for their work rhythm.

The location of the rig was far from the regular work place. For a period of time, all respondents therefore lived in temporary quarters at the location when they worked at the rig. They did therefore not commute on a daily basis.

When working at the location all respondents worked shifts. But work time per day and the length of being at the location varied among both leaders and the engineers due to different responsibilities and tasks. Engineer 1 normally worked 12 hours a day, 7 days a week, for 14 days at a time, while the leaders, engineer 2 and engineer 3 worked about 14 hours a day at the location. This was because they had to be present during the handover meetings and replacement of shifts to pass information from one shift to another. However, the respondents stressed that working time was within the Norwegian Environmental Act (Arbeidsmiljøloven) and that health, safety and environment (HSE) was strictly followed.

After working at the location for 14 days, engineer 1 spent 14 days at home without working. He stated that this was normal in these kinds of projects in this industry. The leaders did not have such regular stays at the location. They were present at the location when it was necessary. Similarly, engineer 2 and engineer 3 did not have a regular work schedule for working at the location. They could be there for some days at a time, or a week or two. Engineer 2 stated that one had to "*"accept and deal with events as they occur".* Engineer 3 pointed out that when he worked at his normal office, he was very strict to not work more than 7, 5 hours per day.

When the respondents were asked about their regular week rhythm in project Alpha, they stated that there were no regular week rhythms. However, Engineer 3 said that himself, engineer 2 and two others, the last 2-5 months of project Alpha had weekly meetings every Friday at their normal office. At this meeting they reviewed the progress for the week and everyone got clear and concise work tasks. These meetings had a clear structure and agenda and meeting minutes were written afterwards. Engineer 3 wanted all meetings to be like their Fridays meetings.

The respondents pointed out some elements they perceived as important for their regular day rhythm. These were: project meetings, handover meetings and interaction with co-workers. The leaders and engineer 2 had regular project meetings every day. In these project meetings the parcel owners explained about the progress with their parcel. The leaders did also have two handover meetings every day between each shift. In addition to the daily meetings, engineer 1 pointed out that interaction with other co-workers and leaders were important for the regular day rhythm. Regular meals and coffee breaks were also important for the day rhythm, according to engineer 1 and leader 1. Engineer 1 told that these breaks were not planned, but it often occurred that during these breaks they discussed work in an informal manner.

The respondents told that most of the meetings took place on a daily basis at the location. These were two handover meetings and one project meeting. Engineer 2 meant that there were in general too few meetings. He would have suggested more meetings if the meetings had been more efficient, like the Friday meetings.

According to Engineer 1, the intensive work in project Alpha resulted in many one-to-one "meetings" or conversations. Engineer 1 pointed out that clear and short communication channels, made it easy to contact relevant people directly when it was needed. They discussed the issues right away without formal requests. All respondents did this when needed.

The two leaders attended the handover meetings and project meetings when they were at the location. Leader 1 experienced that everyone that needed to attend showed up when they were at the location. Leader 2 had partly the same perception. He claimed that people only attended meetings if they believed that the meeting would be relevant for their work. It was also dependent on which phase the project was in. Engineer 1 was pleased he did not have to attend the regular meetings. He explained that from experience from previous projects, regular meetings were seldom efficient and people often stop attending such meetings because they believed it was waste of time. He specified he only attended meetings if they were actually needed and necessary. According to engineer 3, all attended the Friday meetings that they held, as long as they were not at the location working.

The respondents disagreed when they were questioned about the importance of meetings for project Alpha. Leader 2 and engineer 2 meant that in the beginning and the end of project Alpha, meetings and the rhythms in the meetings was especially important. They said that having good and efficient meetings in preparation, start-up, follow-up and in the completion

phase were essential for finishing project Alpha. Engineer 3 believed that the Friday meetings were important, as these enabled them to work together as a team.

Leader 2 pointed out that regular meetings during project Alpha were necessary, but the project meetings did not have to be so intense and detailed. Leader 2, engineer 1 and 2 stated that the meetings could have been more important throughout the project if they had been clearer and more structured, since many of the participants considered the meetings as waste of time and ineffective. Leader 2 believed meetings should be an important management tool to establish clear objectives and set work tasks into a system. He believed that the management in project Alpha should have used the meetings and meeting minutes more efficient to communicate the information to everyone in the project in a more structured and efficient way. Leader 1 believed that the inefficiency of the meetings was due to the high number of project leaders and parcel owners that completely lost the control on what was going on.

"Too many cooks spoil the broth", leader 2

4.3 Temperamental fit

We wanted to reveal the respondents points of view on how they perceived and dealt with temperamental job-fit and demands from the organisation. To be able to discover personal temperamental-job fit, different factors had to be explored. We have focused on some relevant factors including work tempo, time pressure and tight schedules, multitasking, punctuality, and work time vs. non-work time.

All the respondents agreed that the work tempo varied based on the phases in project Alpha. According to the respondents, projects in the petroleum sector often start in a slow tempo. When a certain date or deadline is approaching, the rate of the work tempo increases significantly. Further they stated that organisations often demands high tempo at the end. According to the respondents, in project Alpha this period with high tempo lasted around 8-9 weeks. It was a general understanding from the respondents that the work tempo in project Alpha was high from the rig arrived at the location in Norway to the end of project Alpha. But they stated that this was as expected. The tempo was manageable, and also could have been higher, according to engineer 3. He believed that many workers and leaders did not go the extra mile for project Alpha. Engineer 2 agreed. According to leader 1, this was an extraordinary project in many ways, which was a motivator for him and other workers to give the little extra.

All respondents enjoyed working in the environment of project Alpha, especially when project Alpha was "storming". They all stated that if they had not enjoyed it, they would have done something completely different. Both leaders and engineers believed they got a "kick" of working when there was some "action" going on. The respondents had the understanding that in general all workers appreciated and worked better and harder when they were under deep stress. However, leader 2 said that some workers felt the pressure and that the tempo sometimes was too high. It was a mutual understanding among the respondents that they only could work in such a high tempo over a certain period. After that they needed some time off to rest and recover.

Three of the respondents experienced time pressure and a tight schedule, even though they said it was as expected. Engineer 1 said that if nothing was pushing you to work, you would start resting. Leader 2 claimed that the tight deadlines and milestones were motivating. The respondents agreed that the short deadlines were a bigger issue for the administration, not for the installers that worked on the rig.

All respondents stated that in this sector and in projects similar to project Alpha, too short deadlines were normal. One cannot get beside the fact that there were some politics involved when setting the deadlines, stated one of the engineers. According to leader 1 and engineer 1, in projects as project Alpha, deadlines were often postponed due to unclear tasks, chaos, and other factors. In addition, the scope and size of the project increased tremendously, and project Alpha therefore "lived its own life" according to engineer 2 and 3. Engineer 1 stated that most leaders and parcel owners expressed that it was likely that the deadlines would be postponed. He further stated that in more extensive projects there is less ownership to the project by each individual and therefore the feeling of failing decreases. This made it difficult to make a clear plan and schedule as everything changed and expanded along the way, stated engineer 3. In project Alpha, the schedule was only clear in the start-up of the project and the respondents did not know if a new schedule was produced when the project was delayed the first time.

When it comes to multitasking, it was a mutual understanding among the respondents that multitasking was an underlying requirement to work with high tempo, they were used to it. All respondents stated "there were many things happening at once" and it was normal to carry out several tasks at the same time. Leader 1 saw multitasking as a prerequisite for working in the position he did. To be able to focus at only one task at the time would have been better,

but in reality that was not possible. Especially not in project Alpha, due to an increasing scope and high degree of interaction and collaboration with co-workers, stated engineer 1. Engineer 1 also stated that multitasking was not a problem if one had a good fit with the co-workers. Engineer 2 pointed out that you had to work on several tasks, since it was not efficient use of time to only "sit and wait" if you for example waited for response on an e-mail. *"In the meantime, you have to do something else",* engineer 2.

In general, all respondents pointed out that it was accepted to discuss work with co-workers, as it enabled collaboration within the project. Since it was part of their daily work they did not find this disturbing. However leader 1 sometimes wanted to lock the door to his office and to not answer the telephone and only work with his tasks, but he could not do that. However, to be able to finish within the final deadline, this was precisely what engineer 1 and two of his co-workers did the last week. They moved their office to another building to be able to work hard and dedicated without people knocking on their door.

Another aspect of temperamental-job fit is how punctuality in project Alpha was emphasised in terms of time and work tasks. It was a mutual understanding between the respondents that Nor-Oil wanted to be punctual and finish on time, to make a good impression on the contract owner. It was therefore a high focus and priority for Nor-Oil to be accurate and deliver the different parts on time, according to engineer 2.

To be punctual is the only thing that matters according to leader 1. If you are not, it can affect many things in the project and on all levels of the organisation. Engineer 1 agreed and pointed out that when they started reaching critical phases of project Alpha, they had to make sure to complete the work tasks on time. This was important to be able to have flow and to reach the final deadline. Engineer 1 therefore believed it was important to follow some deadlines along the way. Even something you believe as a bagatelle can have a large impact for the whole picture, leader 1.

When it comes to the separation between work time and non-work time engineer 3 said that everyone are different and therefore work and think differently. All respondents except engineer 2 and leader 1 said they had no trouble putting the work down after a workday, they had a clear separation between work and leisure time. However engineer 1 accepted a couple of telephones and e-mails when he was off work, while engineer 3 waited to respond e-mails and phone calls till the next day. Engineer 3 was also clear on not working overtime. Leader 1 specified that at the location, he disconnected and was in another mode, *"you are there to do*

a job and nothing else matter". Leader 2 did not think off work when he went "home" to the temporary quarter in the evening, he had a clear distinction between work and non-work. Engineer 2 did not disconnect from work and he answered phone and e-mails even though he was home. He explained that he gets into a *zone* and think about work 24/7.

"Either you are a person that put your mind to work 24/7 or you are not", engineer 2.

4.4 Organisational structure

With the aim of determining whether the organisation structure was more mechanistic or organic, we asked the respondents questions to identify characteristics of the organisational structure. These questions were focused on information, responsibility, authority, tasks, coordination, loyalty, openness, prioritising regarding tasks and resources, and performance.

The respondents were asked if they experienced that everybody was well informed. Engineer 1 perceived the project organisation as informal. He stated that lot of time was spent on searching for necessary information (who had the responsible, who to contact, who worked on the different subject and when was the work going to be conduct, etc.). This led to frustration and unnecessary interruptions. He experienced that there were very little communication downwards in the project organisation. He wished there had been an organisational matrix with clear chain of command, then he believed people would have known who to contact. Engineer 2 also stated that the communication and information had not been optimal and that the coordination between the different divisions was poor. He experienced cases where people did not inform about making changes, and this have had an influence on other peoples work tasks. Leader 2 agreed that project Alpha had challenges regarding communication. He said that the communication was not perceived as good and in many cases they had to acquire the information on their own.

Leader 1 stated that the vision for the organisational matrix was good in theory, but it turned out to be difficult to implement. He was generally satisfied with the structure of the internal organisational matrix. However, he felt that there were some loose ends when it came to the customer. Leader 1 stated that the flow of information between Nor-Oil and the customer was not ideal and resulted in very pour flow of information from the project management and downwards. He meant that the poor communication was a result of the organisation being inexperienced. According to leader 1, the organisation was new, the collaboration between Nor-Oil and the customer was not optimal and there were too many contract workers. Additionally, he felt that the reporting from parcel owners down to engineering and installing

units was insufficient. Both leader 1 and engineer 1 stated that if the information stopped in one link in the matrix, it resulted in people not knowing where and whom who had the information, and consequently who to contact to gain the information they needed. Both leaders mentioned that it was a problem that they did not receive meeting minutes. They said that in most projects the meeting minutes were given as general information, while additional information one must provide themselves. Engineer 3 continued to mention his need for more meetings and that more meetings would have contributed to spread information.

When asked about responsibility, engineer 1 referred to leader 2 as a person that makes informal projects such as project Alpha manageable. According to Engineer 1 this leader was a person that took responsibility and initiative, was involved in everything, and pulled the load. Leader 1 meant that the workers were not fully aware of their responsibilities because these were not clearly defined. He claimed that in many cases the parcel owners did not require sufficient reporting nor did they follow up what had been done/not done. In addition, he said that some people only did what they were responsible for. Leader 2 stated that people maybe took too much responsibility. He believed that the workers did more than they actually were competent to do.

Several respondents stated that the project leader was absent. There was no clear deputy, and this lead to unclear chain of command and the lack of persons who took decisions. Engineer 1 stated that the lack of organisational matrix meant that there were no clear areas of responsibility.

Leader 1 said in the start of the project, that from parcel owners and further down in project Alpha, they were very free in relation to work tasks. At the end of the project this changed and work tasks became more detail controlled. However, there were no parameters to measure the work. According to leader 1 many people have done work at project Alpha that was beyond what was expected. Engineer 3 added that because the work tasks in general were little specific, people worked on their own initiative.

According to the respondents, the coordination was not perceived as optimal. Leader 1 stated that the competence to the project managers and the parcel owners was not solid enough to coordinate the different personnel in the organisation. Several respondents stated that much of the coordination consisted of mutual adaption.

When questioned about loyalty and ownership to Nor-Oil leader 2 stated that "Nor-Oils own workers were very loyal". Engineer 1 meant that it was depended on what personality the person had. For him it did not have anything to do with what firm you worked for or which position you had. He experienced that workers on contract also had ownership to the project and took responsibility. According to engineer 1, loyalty was independent of what logo you had on your helmet. Leader 1 thought the workers gave a little extra for the company they worked for. He said that large projects often are dependent of contract workers which had loyalty to the project.

For engineer 1 it was never a problem to communicate upwards in the organisation and he never felt there was a problem communicating directly to those involved. He felt there was a culture for openness internally in Nor-Oil. However, leader 2 stated that he experienced that some people were afraid of losing their positions and therefore kept silent in some situations.

Regarding priorities of resources and tasks, engineer 1 stated that the customer's requirements decided the priorities. At the end of the project when there was a lot of work needed to be done he focused on the task that had highest priority. He believed that a certain type of people was needed to conduct these types of projects and luckily these were present in the organisation. Engineer 3 emphasised once more his need for meetings. Because there were no meetings setting the guidelines, he had to prioritise on his own deciding what resources to use.

When questioned about the performance of the work leader 1 explained that it was expected that the workers should deliver the work they were responsible for to the parcels. He said that within the frames given by the parcel, they could decide how to perform it, but he meant that this was not properly followed up by the management. Leader 2 believed that not all personnel were competent enough, but that it was up to each person to perform and solve tasks. Engineer 3 stated that if you did not know something, then you had to acquire the ability and this was not something that was special with project Alpha.

4.5 Communication and interaction

Respondents were asked questions regarding the communication and interaction in project Alpha, since we wanted to know if the communication and interaction could influence the rhythms, flow and thereby be indicators of success.

All respondents answered that the communication between the personnel involved in project Alpha were mainly face-to-face, by telephone or e-mail. They stated that the advantage of using e-mail was that they had the communication in written and it also made the communication traceable. If there at one point was necessary to involve several people in the communication they had the opportunity to do so by sending an e-mail.

Although the respondents stated the advantages of using e-mails, the two leaders also had concerns about this. Their role as leaders made that many people wanted to get in contact with them, and this resulted in an enormous amounts of e-mails. Leader 2 believed that in these kinds of projects there is a general misuse of e-mail, resulting in far too much e-mail correspondence. He received over a hundred e-mails a day. That is why he specifically encouraged other participants in the project to use telephone instead of e-mail since this would shorten the response time and important messages would be received and handled immediately. Leader 1 received over four thousand e-mails over a period of three months and he regarded e-mails as the worst means of communication, and for him e-mails subsequently had the lowest priority. As a result of the amount of e-mails, both leaders feared that important information would disappear, or be conveyed too late since they did not have time to read and respond to all of them.

When questioned about the response time regarding e-mails, all respondents generally perceived this as good. Engineer 1 expected response during one day in projects like this, and engineer 2 expected response within a few hours. Engineer 3 stated that the response time was longer when the questions were difficult or required some effort.

The respondents were also asked how they perceived general response in regard to willingness to solve problems and help each other, answer questions and cooperate. The three engineers told that lack of response had not been a problem. They generally felt that there was a very good cooperation and believed that people involved in the project wished to do a good job and that there was a willingness to help each other. According to Leader 1 there was a good collaboration internally in the organisation, but that they had challenges related to the

customer. Leader 2 said that the response was good, though it might have had something to do with his position as leader.

Regarding disturbing interactions the respondents answered contradictory. The two leaders and engineer 3 said they were not affected by disturbing interactions to a great extent. They expressed that disturbing interactions were expected in projects like these.

Engineer 1 on the other hand stated that he experienced to be disturbed, particularly in the last phase of the project. This disturbance affected his work to the extent that he moved his office to be able to work without being disturbed. He explained that the constant disturbance might have something to do with his multi-role in this project, since he have had different roles and had been in contact with many different people, at different times, in different phases. Engineer 1 felt that the extensive communication he had been part of in project Alpha led people to contact him and ask questions regarding earlier themes and problems. The disturbing interactions affected him in a negative sense, and he experienced being annoyed. While there in situations like this is tempting to close the door and lock yourself in, Engineer 1 believed that a closed door made it difficult for people to contact and talk to you, so keeping the door open was an advantage.

"…but it is difficult to get work done if people run down your door", engineer 1

Engineer 2 mentioned a different experience of disturbing interactions. For him, the general noise from open landscapes office caused problems. He had problems with working in an open landscape office, because he would be too curious to what other people did and talked about. When he was disturbed by people asking for help this was no problem. However, he needed an office of his own where he could work in quiet.

In relation to disturbing interactions and coordination three of the respondents specifically mentioned the importance of openness in a project like this. They believed it was very important to be honest, say your opinion, ask questions and take the initiative. They said that the stress factor could be high and it was therefore important to be able to speak out, and then have the ability to move on.

When questioned if interactions were coordinated from above, the engineers replied that the management was absent. Engineer 1 felt that no interaction was coordinated from above and this led people to act on their own initiative, which lead to both good and bad decisions. He would have liked more control and a more active management. The two leaders

communicated and coordinated interactions downwards and did not experience the absence of management in the same way as the engineers. Leader 2 explained that the operational personnel experienced communication coordinated from above and mutual adaption. In the handover meetings, the project management coordinated with middle management, and when installing, the middle management communicated and coordinated with each other.

Engineer 2 felt that more meetings were needed and that more meetings would have helped to spread the information. Leader 1 also experienced that he had to search for information. Again he mentioned their problems regarding the customer. Internally in the organisation they found the information they needed, but in the relation to the customer it was both difficult to obtain information and to find out who had information. Leader 2 experienced that the information given in the handover meetings was not sufficiently detailed, which led to low efficiency for the installers in the beginning of the shift. He further pointed out that this was one of the challenges with this type of shift work.

4.6 Time and flow

Here we will present results regarding time and flow. We hoped to identify the characteristics of time and flow, to see if they could be related to the organisational rhythms.

The respondents said that since several of the phases of project Alpha were conducted simultaneously, this led to time pressure from the beginning. Engineer 1 said that much work was performed in short time. He had worked a lot of overtime in the last phase of the project. However, he did not feel that the time pressure and hard work threatened the quality of the work.

The respondents expressed that the project organisation had been less than ideal. However, leader 2 said that considering the assumptions he felt that the time spent was good and it was generally little dead time or inefficient use of time. Engineer 3 seemed to disagree since he felt there was inefficient use of time. He wished that the organisation had prioritised differently with more planning meetings, where Leader 1 stated that if the project organisation had been ideal, the time spent would have been planned and utilized better. He said that the organisation consisted largely of new resources and contract personnel and that different working methods and views on how to approach project Alpha made it difficult to make plans.

None of the respondents expressed that they had experienced being tired to the extent that it had affected their performance. Leader 1 believed that tired personnel had not led to increased time spent on the project. He found that ownership to the project and the work tasks had overshadowed the fact that people were starting to get tired. Leader 2 said that although people were stressed, stress could also function as a motivational factor. Several respondents mentioned that abrasion and stress were influenced by their role in the organisation.

We described the characteristics of flow to the respondents. The characteristics of being in flow was described as immersing fully into the task, to be in one with the work, to be fully involved and concentrated and sometimes even forget about time and place. Since the perception of flow is individual we are presenting a specific review of each respondents answer to this question.

Engineer 1 said that he experienced being in flow and that he liked to work when there was flow. He said it took some time before one found its place in the organisation but that he experienced being in flow in the last phase. Short and direct communication paths and ownership to the project and work tasks as were for him important contributors to achieving the flow experience.

Engineer 2 emphasised that the ability to find flow was strongly affected by the individual's personality. The last phase of the project was characterized by a lot of work and high pace. Some of the reason for this was that in earlier stages in the project they did not have time to finish tasks because something else needed to be done. The unfinished tasks then had to be taken up again and completed at the end of the project. He did not use the word flow, but the last weeks of the project he experienced being in a "zone" where he was engrossed by the work. He described the work as fun, he had a feeling of energy and rush, and only had the work tasks at mind. In addition, he did not experience a collective with his co-workers.

Similarly, engineer 3 did not experience flow in the way we described. However, when he was drawing construction documents then he did not have anything else to think about. He called this feeling "good times", however the task was not necessarily something he liked to do.

Because leader 1 did not have a defined role in the project, he found it difficult to relate flow directly to a specific project task. However, he said that the feeling of doing a good job and perform well was present all the time. He stated that he knew he could have delivered better

quality of the crew if they had more time, but he was happy with his own performance in this situation. Leader 1 said that there were flow among the at the end of the project. However, he meant that this flow could quickly disappear since people undertook new tasks when they already had too much to do, or they did not have the skills to do them.

Leader 2 stated that the only time he experienced being in flow was the last day of the project, the day the project was completed. He believed flow and what he called "the flow zone" was a condition where you got into a comfortable sleep mode where everything was under control. He characterised this flow zone as dangerous because in those types of projects you never had completely control until it was finished. He believed that co-workers could experience the feeling of having flow, but he did not get this feeling. This could have something to do with his responsibility. He stated that as a leader he had a great responsibility and this also made it more difficult to relax. However, he emphasised that this was his personal opinion, and he acknowledged that there could be various perceptions of the term flow.

4.7 Indicators of success

The respondents were asked questions regarding the three traditional success factors; deadlines, quality and costs. We hoped to clarify to what degree the project managed to keep up to these factors.

The first factor was project Alphas ability to keep to deadlines. The respondents had differing answers, some respondents answered by looking at the project from an overall view, while others related deadlines to their specific work tasks. Engineer 1 and leader 1 said that on an overall basis, project Alpha did not keep to the deadlines. Leader 1 stated that the project was not completed within the deadlines since the objectives were not sufficiently defined, neither by Nor-Oil nor by the customer. Engineer 1 said that even though the original deadlines were exceeded, project Alpha was still as a success. Despite of the increased size of the project and the limited time, he believed that the final product turned out to be good. Leader 2 and engineer 2 stated that in the last phase, the deadline was met. The last phase was the actual implementation of the project. Engineer 2 stated that he was glad the overall deadlines were exceeded because this made them able to do the work properly. He meant that if the deadlines had not been exceeded, the repercussions could have led to big economic and human consequences if the work was done wrong. According to leader 2, they had a lot of work along the way with clear deadlines that had to be fulfilled both in terms of time and

requirements. Engineer 3 related this question specifically to his work tasks and he stated that the deadlines for his particular work tasks were met.

All respondents linked the issue of quality in project Alpha to the large number of contract workers. They all stated that since the Nor-Oil was under pressure regarding time, they had to hire many at short notice. Because of the short notice, the contract workers Nor-Oil normally would hire were busy with other projects. This led to a varying degree of competence and skills among the contract workers. The respondents also believed the contract workers did not have the same connection to the project and Nor-Oil as the people with permanent positions. Leader 2 emphasised that it was a challenge for the project that some of the contract workers in key positions had less ownership and less respect for Nor-Oil.

Engineer 1 and leader 2 stated that in some aspects, the quality could be less good and on other aspects it could be very good. They considered the overall quality as average good and they were satisfied with the end product. Both of them also specifically mentioned the minimum requirements in relation to quality. They explained that there were various standards that needed to be followed, and in this industry they were strict and unalterable. Preferably they would deliver quality above this minimum requirement and sometimes give an extra effort to make the quality better than the requirements. Leader 2 also highlighted that different stakeholders had different views on the quality and this was not always in agreement with the customer regarding quality. However, he commented that other rig-operators already have been interested in renting the rig, when it once more is available for renting. He saw this as a confirmation that the quality of the work in project Alpha was above satisfying.

Leader 1 did not feel that the quality was fulfilled in project Alpha, due to both the increased scope and size. Engineer 2 felt that the quality on both engineering and installing was good and it met all technical requirements. Engineer 3 also meant that the quality was satisfying. They did not have the knowledge and competence at the start of the project, but they acquired it during the project. Engineer 3 said that Nor-Oil did not have any specified requirements on drawings or on work tasks at the beginning of the project. This was because the organisation was so new that these had not been developed yet. They therefore had to make these requirements from scratch and use them along the way in the project. He said that they had to follow the requirements from the industry and the rig. He had the impression that people did their best, regarding their competence. However, sometimes he believed that "the best" was not good enough.

The engineers did not have any numbers or specific information regarding the cost limits but they knew these were exceeded. Engineer 2 stated that because of the increased scope many changes were made in project Alpha, and as long as you made changes you also had to adjust the expectations. Leader 1 stated that that the cost exceeding was tremendous, because nobody had control over the size of the project. As a result of short deadlines, they had to hire more personnel that again led to more costs. According to leader 1, Nor-Oil, the customer and suppliers could all be blamed for this. Leader 2 stated that costs did not end up being that important. The customer would pay no matter what. He stated that in this industry it is expected that the costs always increase.

"They had in fact expected high costs, but not this high", leader 2.

Engineer 1 rated time as the most critical and the absolute top priority, and said that in projects like this, time is normally most important. Quality would come second, and cost third. In his experience the cost is not important in these projects because the earnings are so fast afterwards. Engineer 2 meant that time and HSE had the highest priority and that quality was a part of the total package. He thought time was most important because it had been a decisive factor for very many choices made in this project. Engineer 3 felt that both time and quality was important in project Alpha. He would personally prefer quality to time. Leader 1 did not have any particularly thoughts regarding the priorities of the success factors in project Alpha. Leader 2 thought that quality and costs were both important, but keeping to the deadlines were most important.

As the results illustrates, the respondents had different viewpoints regarding which factors influencing work rhythm, flow and success in project Alpha. In the following chapter the main findings will be analysed.

5. Analysis

In this chapter, the results conducted from the study will be analysed based on literature.

The results were presented based on the sections in the interview guide. From the results we experienced that many of the findings were related. We therefore found it natural to divide the analyses into other categories than the ones presented in the results. The categories were chosen based on our understanding of the information that emerged from the interviews and what we considered relevant for answering the research question. From the results it became clear that not all the factors in the interview guide provided answers to answer the research question. We therefore limited the analysis to focus on the following factors: planning, meetings, scheduling, deadlines, contract workers, AoC and organisational structure. These findings will be discussed in the following sections.

5.1 The importance of planning, schedules and deadlines

From the results it emerged that planning had impact on the scheduling, deadlines, punctuality and the indicators of success in project Alpha.

Knudsen (2012) states that scheduling and planning are closely related. According to Stricker (n.d.) a well-functioning plan leads to a schedule that allows everyone in the organisation to know their tasks. The respondents stated that clear and updated schedules were absent from the top organisation in project Alpha. However three of the respondents experienced a tight schedule. This might have to do with different opinions and expectations regarding what a clear schedule and plan means and what it should include. Knudsen (2012) points out that it is a difference between working with self-managed or imposed schedules and deadlines. From the results it can be understood that the respondents wanted clear schedules and plans constructed by the project organisation, and did not mind deadlines or schedules which were imposed from above. A reason can be that the lack of clear schedules made it difficult for the respondents to know what to expect and which tasks to carry out. It was evident that the absence of a clear and realistic schedule affected the project planning throughout the whole project organisation.

As indicated, project Alpha had been conducted in a unique and demanding way regarding the handling of time. Temporal structures are ways of coordinate time in organisations and can for instance be project schedules (Orlikowski & Yates, 2002). Lack of a functioning project schedule can be traced back to planning. With adequate planning, the project organisation

could have been able to develop schedules that contributed to coordinating and utilizing time better in project Alpha. This is supported by Cleland and Ireland (2010), that consider planning as the most important part of a project. In addition, successful planning can be identified as an indicator of success (Baker et al., 1988). However, the project organisation and Nor-Oil were able to get the work done, without a clear schedule and efficient planning.

From the start of project Alpha, the short deadlines, time spent and increased scope caused challenges. Due to this, several of the project phases were conducted simultaneously. According to Stricker (n.d.), a project consists of several phases including initiation, planning, execution, monitor and control, and project ending. Especially initiation and planning are crucial to achieve a successful project implementation. From our results it emerge that the time in the engineering and planning phase was not well spent, and led to increased workload for the respondents. However, in the installation phase, the time was perceived as maximum utilized. These phases would be conducted separately in a good project (Stricker, n.d.). Another reason for completing the phases is because one phase set the standard for the next phase (Stricker, n.d.). This can be related to Zucchermaglio and Talamo (2000), where a thoroughly planned organisation reduces the waste of time. It emerged from the results that the respondents had adapted to the situation of conducting several phases simultaneously. The respondents were not too frustrated, and they managed to perform and be efficient considering their situation. As engineer 2 stated, one have to *"accept and deal with events as they occur".* These results can be supported by Pérez-Nordtvedt et al. (2008) that argue that temperamental job-fit is important for performance and effectiveness for both individuals and organisations. This is because the respondents apparently had to adapt to demands from the project organisation and adjust to the situations when they occurred.

The respondents identified poor planning as a reason for the problems regarding the start-up and ending dates in project Alpha. Although there were clear and structured plans on how the work should be done to fulfil the requirements from the customer and from the Norwegian government to approve the AoC, the deadlines were still postponed. The postponing of deadlines had to do with AoC not being approved within the stipulated deadlines. Another supplier in the project organisation was in charge of the work with AoC, and Nor-Oil had nothing to do with this. This means that AoC is an external cue in Nor-Oils environment, since Nor-Oil had to entrain and adjust their activities to the AoC. AoC affected Nor-Oils work, planning, scope and deadlines, and thereby decreased Nor-Oils work rhythm, without Nor-Oil being able to influence it. This corresponds with Knudsen (2012) description of

rhythmic cues as important for organisations rhythm, as indicated in the conceptual framework.

Another issue was the tight deadlines during project Alpha. The respondents claimed that there were clear deadlines in the project, even though clear schedules were missing. Further, they stated that these deadlines to a certain point had to be taken seriously and needed to be followed. Nor-Oil had a strong policy regarding deadlines, with the aim of showing co-workers that deadlines are important and achievable. We were surprised to find that it is not necessarily negative if deadlines are set too short. To us, it seemed that Nor-Oil and the leaders in project Alpha were so professional that they did their work with a high degree of continuity. The workers in Nor-Oil had a temperamental job-fit that was adapted to achieve the different deadlines without influencing the quality of work. This can be related to tempo entrainment where workers adjust their tempo of work to the time limits(Kelly & McGrath, 1985 in D. G. Ancona & Chong, 1992). It is noticeable that Nor-Oil managed to distinguish between different types of deadlines, during and in the end of project Alpha, without having clear schedules.

Knudsen (2012), claims that deadlines, punctuality and schedules are closely correlated. This corresponds with what we come across in this study. This means, if one of these dimensions is absent or not being followed, both project organisation and workers will be affected and need to readjust. From this it became clear that personal temperament and expectations from organisation need to match, if workers are having temperamental job-fit. This allows us also to recognise the link between temperamental job-fit and flow in their work, as indicated in the conceptual framework.

One of the leaders said that the concept of quality can be perceived differently. The respondents generally thought the quality in project Alpha was satisfying. However, there were problems with the large amount of contract workers. The respondents felt that the contract workers lacked sufficient competence and ownership to the organisation. They believed this might threatened the quality of the work, which Nor-Oil sought to deliver to project Alpha. In a study of "Norwegian Postal Service" (Posten), Söderlund (2010), identified that challenging deadlines forced the organisation to readjust to the situation. Because of the increased scope and tight deadlines, project Alpha also had to readjust to fit the situation. One readjustment was hiring contract workers. To fit the time available, the use of contract workers can be useful (Söderlund, 2010). According to the respondents, several of

the contract workers had key positions in the organisation. Some respondents stated that the contract workers lacked ownership and competence and that there was a conflict of interest between Nor-Oils workers and contract workers. Substantial resources on planning and control are necessary for a project to achieve the desired quality (Heidenreich, 1988). In summary, poor planning and insufficient control of the scope lead to hiring of contract workers, which could be a threat for the quality of the work.

5.2 Meetings as contributor to work rhythm

From the results it became clear that meetings are an important factor which influenced the work rhythm in project Alpha. The respondents highlighted the importance of meetings when questioned about their daily rhythm. This is supported by Knudsen (2012), who claims that "meetings" is a rhythmic cue, which is important for identifying organisational rhythms. The two daily handover meetings were important for setting the tempo for the installers. On the other hand the one daily project meeting were by several of the respondents considered as chaotic and unstructured and a "waste of time". Our results show that the project meetings affected the tempo and pattern of the work negatively, as these meetings where particularly inefficient. These results can be supported by Bliss (1976), that states that meetings often are waste of time, if they are poorly planned.

The respondents emphasized that the project meetings did not set a work rhythm for project Alpha. In their study of Integrated operations (IO) and use of virtual meetings in Statoil, Knudsen and Mydland (2013) found that the regularity of virtual meetings functioned as rhythmic cues, which sat the organisational rhythm and supported self-organised and improvised interaction. They also found that there were clear requirements to the participants at the meetings. Although, virtual meetings cannot be directly comparable to the project meetings in project Alpha, we still consider that there are some similar elements. When comparing our findings from the project meetings with the virtual meetings Knudsen and Mydland (2013) studied, it emerged that there were no clear requirements to participants in the project meetings, and these meetings did not function as rhythmic cues. However, it was evident that the absence of effective project meetings, supported interactions between co-workers through mutual adaption.

Unlike the project meetings, efficient handover meetings, random one-to-one meetings and conversations were perceived as "meeting" cues that helped Nor-Oil and other participants in the project to gain a good rhythm in their work and daily activities through good patterns and

tempo. The different opinions regarding the importance of meetings, clearly illustrate the perceptions of meetings as an important cue to create patterns in their activity cycle. However, this differs from each individual and can be related to their personal fit. In the virtual meetings there were clear requirements regarding to the participants. This was not the case in project Alpha, which can be a reason for the feeling of unstructured meetings, even if everyone attended. This can also be supported by engineer 2 and engineer 3 perceptions of why they enjoyed their regularly Friday meetings. Our findings therefore show that type of meeting depends on whether the meeting influence and set Nor-Oils organisational rhythms.

We can notice that the cue "meeting" did not set the appropriate tempo for the work in project Alpha. Some meetings created good work rhythms like the daily handover meetings, while other meetings like project meetings where carried out in a way that damaged the work rhythm. However meetings still created patterns for the cycle of the work, like Ballard (2009) states. The meetings were also influenced by the organic elements of the project organisation, which led the respondents to feel that they received little benefit from the meetings.

Meetings appeared to both affect and to be important for the rhythm, organisational structure and communication in project Alpha. Meetings who were unclear and unstructured, influenced the work rhythm of the workers in a negative way, while informal and structured meetings affected the work rhythm in a positive way. This corresponds with the conceptual framework where there is a relation between organisational rhythms, rhythmic cues and organisational structure. This means that some respondents experienced work rhythm due to effective meetings, while others believed a better work rhythm could have occurred if the meetings were better coordinated and structured from the project management.

How the meetings were conducted, and what occurred before and after the meetings helped us to identify some characteristics of the organisational structure. The project organisation initially had an organisational matrix, where the authority and control was delegated from the top of the hierarchy. This corresponds with what Burns and Stalker (1994) have described as a mechanical structure. However, the respondents characterised the project organisation as highly unstructured. They therefore needed to find information themselves, partly because the organisational matrix appeared unclear. These characteristics are more similar to what Burns and Stalker (1994) have described as an organic structure. The respondents expressed the desire for more structure. From this, we can see that the structure that the project organisation and workers wanted did not correspond with the actual situation. Instead of being

mechanistic, the structure of the project had several elements of the organic structure. The organic elements led to lack of monitoring, control and less information flow in the project. The unstructured meetings can then be viewed as a result of the unstructured organisation. Meetings are by some of the respondents seen as an important management tool in normal settings. Workers may have had to go through several communication links searching for information that could have been given directly or spread through meetings or meeting minutes. This resulted in that workers wasted time searching for this information and the risk of important information being overlooked which could affect the quality of the work.

The results did not point out that there were special routines that happened before or after the meetings. Bliss (1976), states that there are some key elements required for attaining good and efficient meetings. The most important ones are: an agenda provided in advance, summary at the end of the meeting and distribution of meeting minutes afterwards including briefly what was decided and who are doing what. From the results it appears like none of these elements were taken into account in project Alpha.

The respondents pointed out several times, that the meetings were waste of time. One reason for this can be the lack of meeting minutes afterwards. These meeting minutes do not have to be long and detailed, the "briefer the better" as long as they cover what was needed, what are the deadlines and who are doing what. What was actually decided in the meetings would then be carried out and everyone would have all the information (Bliss, 1976). From the results it is clear that Bliss (1976) advice for clear agenda and meeting minutes would have increased the importance of the meetings.

The results from our interviews show that the organic elements in the organisational structure of project Alpha contributed to unstructured meetings. Several respondents called for a more structured organisation where the information could be clearly communicated. As engineer 3 said, no guidelines were given in the meetings, and he had to decide how to prioritise and what resources to use. This underlines the importance of a clear organisational structure. This indicates a relation between meetings, as one of the rhythmic cues, and the organisational structure. The organisational structure sets the foundation for communication and interaction. The inadequate flow of information caused interactions through mutual adaption, and the individuals could experience this as both supporting and disturbing. This could again affect the individual's ability to achieve flow.

We investigated how personnel on both different levels and within different fields in the organisation experienced communication and interaction in the project. From the results it emerged that e-mail was a widely used and popular, but also a somewhat problematic form of communication. The benefits of traceability and history were being overshadowed by misuse. This applied particularly for the two leaders which neither had time, nor resources to read and respond to all the incoming e-mails. The extensive use of e-mails in organisations is by Whittaker and Sidner (1996) characterised as e-mail overload. They underline the negative effect the e-mail overload can have on both the individual worker and the organisation, and they confirm the problem with important information being lost and poor responsiveness. Leader 2 had consequently stated that he preferred communication by telephone, however he still received a lot of e-mails. Viewed in regard of meetings and the organisational structure, communication and interaction through structured meetings and distribution of meeting minutes afterwards, could have contributed to reduce the large amount of e-mail communication in project Alpha.

As it emerges from the results, the initiator of the e-mail risks having to wait for a respond that may never come. The dynamic interaction of initiative and response stops, and the attempt at interaction becomes unsuccessful (Knudsen, 2012). Depending on the content of the e-mails, tasks of different importance are in danger of being put on hold. The time spent on that activity can increase. This can further affect the flow of the initiator and other personnel involved in the activity. This is because the individual rhythm of the person waiting for answer might be disturbed by waiting for a response. If important information is overlooked this can affect both quality of the work and time used.

5.3 The individual perception of flow

In this section the workers personality will be examined individually in terms of flow and interaction. The results showed that the personality and perceptions of the individual workers were highly relevant and to a large extent suited the organisations culture and demands. This can lead to a high degree of temperamental job-fit which can lead directly to flow.

The respondents had different answers regarding the concept of flow, and by using Csikszentmihalyi (1997) flow model, figure 1, we will explain the respondents different perception of flow. Each respondents perception of flow are therefore analysed in regards of Csikszentmihalyi (1997) model of flow and the theory. Engineer 1 clearly indicated that he experienced being in flow in the last phase of project Alpha. According to the flow model,

figure 1, he then must have had work tasks that were very challenging and that he had high enough skills to perform them. Engineer 2 mentioned several of the indicators that correspond with what the theory states as flow, and that according to the flow model, figure 1, he would also have a combination of high challenges and high skills. He clearly expressed enjoyment with the work tasks and thought they were fun. However, he did not describe the feeling as being in flow, but as being in a "zone".

Engineer 1 and engineer 2 both stated that they were in flow, but they described it differently. The theory generally describes flow as a positive experience. However it can be discussed whether the experience of flow for some people is disturbing for others. Brøgger and Salomon (2013) suggests that people in flow is so concentrated that they ignore their surroundings, and that this could lead to communication problems. From this we believe that it in some situations, there could be a relation between temperamental fit and flow as described in the conceptual framework. To find out whether this applies to our respondents, a deeper study of their work environment is required.

Leader 1 described that the workers lost flow at the end of the project because they had too many work tasks or too poor skills. As described in the flow model, figure 1, these workers have most likely left the flow experience and instead experienced arousal or anxiety. When the challenges exceed the skills of a person, the person does not handle the work task as good. We assume this is the reason why workers that worked in project Alpha during very busy periods lost flow in the end of this project, and had to be taken off the project or got other work tasks.

Engineer 3 did not experience the condition of flow. He compared flow to a task, which was not something he necessarily liked to do. This finding is supported by Csikszentmihalyi (1990) theory, stating that flow is correlated with enjoyment and positive experience. If engineer 3 did in fact not enjoy the work, then flow would be difficult to achieve. His statement makes it difficult to place him in the flow model. Leader 2 claimed that he did not experience flow until the last day of the project. Unlike engineer 3, leader 2 expressed that he enjoyed his work. However, he meant that being in flow could lower people's performance. This view does not correspond with theory indicating that flow increases the performance for the individual (Brown & Eisenhardt, 1997). Leader 2 compared flow with being relaxed and having everything under control. If we compare this statement with the flow model, figure 1, then flow according to leader 2 is experienced when the skills are high, but the challenges are

low. This corresponds with his statement that he was in flow the last day of the project. Because this day he did not practice his normal working tasks and things were under control. His skills were still high, but the last day the challenges were low. The leader disagrees with the theory and this reinforces the impression that flow as a term is experienced individually.

Another concept that reinforces the individuality problem with flow is the perception of interactions and multitasking. The majority of the respondents did not experience problems with disturbing interactions or multitasking. They experienced the disturbing interactions and multitasking as a part of the work and as something they expect in this type of project. This can be supported by the model of temperamental-job fit by Knudsen (2012), figure 2, where multitasking leads to job-fit if the person enjoys the work. People that were working were not bothered by these interactions to the extent that they would call them disturbing, but neither were they perceived as supportive. However, engineer 1 experienced the disturbance to such a large extent that he had to distance himself from the working group for a period. According to Knudsen (2012), disturbing interactions can cause individuals to lose flow or prevent them from achieving it, while supportive interactions can help individuals to achieve flow. It can be assumed that the engineer that had to move his office experienced to lose flow because of the disturbing interactions. When distanced from others, he got to work undisturbed and the possibility to achieve flow was greater. This supports the connection between communication and interaction and flow in the conceptual framework. The other respondents did not perceive the interactions as supportive or disturbing, and it can therefore be assumed that the interactions did not influence their ability to achieve flow. The results do not indicate that flow is a prerequisite for affecting quality.

The respondents answers regarding flow underlines the challenges of generalising a term where there are individual interpretations. None of the respondents had the exact same interpretation of flow as the theory. The respondents understood the term and our questions, but they did not feel it was right for them to use the same words. Several respondents achieved a certain condition which we consider comparable to flow. Even though it is reasonable to believe that flow is important, there are no grounds in these results to relate flow directly to the indicators of project success.

Analysis of flow indicates that personal perceptions of the term flow make it difficult to establish a certain connection between flow and success. A relation between communication and interaction and success can then be assumed.

5.4 Indicators of success

All indicators of success in project Alpha were influenced by the increased scope of the project. The deadlines were postponed, the quality was suboptimal and the costs exceeded. One of the leaders stated that the reason for the time overruns was that neither Nor-Oil nor the customer had sufficiently defined objectives, which caused time to be spent in another way than originally planned. De Wit (1988) stated that a project is successful if it has achieved its predetermined objectives. Since the objectives were not sufficiently defined in project Alpha it would make them difficult to achieve. According to De Wit (1988), this would lead to project failure. Walker, Naoum, and Howes (1999) refers to studies who shows that planning, defining objectives, defining the scope and work definitions, could have a great impact on project success. If project Alpha had clear objectives and control over the scope, studies show this could have impacted the level of success (Walker et al., 1999).

From the results, time was considered to have the highest priority of the success indicators, second most important was quality, and finally costs. Heidenreich (1988), believe that the three indicators are equally important and focus on only one of them would lead to project failure. The importance of the three indicators is according to Avots (1984) dependent on the project phases. De Wit (1988) believes time is most important in the first phase, then costs and quality is most important when the project is finished. However, this does not correspond with the respondents answers. From the respondents answers time seemed to be important in all phases of project Alpha, and that costs were understood as not important. The costs increased as a result of the projects increased scope. Although they exceeded by nearly NOK 200 million, it still seemed to be irrelevant. All respondents mentioned quality as important.

However, ultimately it is the end-users point of view that determines the degree of success (Dvir, Raz, & Shenhar, 2003). For project Alpha it is clear that the customer was satisfied with the work Nor-Oil performed on the rig. In addition the quality was obviously above satisfying, since other rig-operators already have been interested in renting the rig when it again is available for renting.

It can be discussed whether the focus on the traditional indicators was right for this project. Because of insufficient planning, several project phases were conducted simultaneously and thereby time was not well utilized in the project. Feedback, organisational structure, planning and management are important indicators of project success (Baker et al., 1988). One of the engineers characterized success both in terms of how they had overcome the challenges, but

also in terms of how the project was conducted. The respondent's answers reflect Shenhar et al. (2001) statement, that there are different views and perceptions of success. Different stakeholders have different preferences to what they perceive as project success, and this makes it difficult to determine if a project is successful or not.

Project Alpha reached the final deadline with quality in accordance with the requirements from the Norwegian government/AoC, which according to the traditional indicators of success, is a success.

6. Conclusion and further research

In this thesis we have examined the relationship between work rhythm, flow and the level of success by using a case study, this was “project Alpha”. In the analysis we showed that several factors contributed to set the work rhythm in project Alpha. Work rhythms were greatly influenced by insufficient planning in the project organisation. Due to poor planning there were no clear and realistic schedules which made it challenging for the workers to know what to expect and which tasks to conduct. Despite the lack of schedules, the project was completed within the final deadline. This was most likely due to the good temperamental job-fit of the workers. The final deadline was kept and quality of work maintained, and that had a positive influence on the level of these two indicators of success.

The external cue "meetings" was identified as another important factor for setting the work rhythm. The workers experienced that structured and informative handover meetings influenced the work rhythms in a positive way. Unstructured and chaotic project meetings on the other hand, influenced work rhythms in a negative way. The unstructured meetings led to poor information flow and workers had to search for information and communicate through mutual adaption. This could potentially influence the level of the success in the organisation through the indicators time and quality.

Other important factors influencing work rhythm, flow and success were the organisational structure, Acknowledgement of Compliance [AoC] and the contract workers. The organisational structure of project Alpha was inadequate, leading to problems with communication. The initial mechanistic structure lacked sufficient support from the top management, leading to several functions being experienced as organic. The external cue AoC caused the deadlines to be postponed several times. This cue was out of Nor-Oils control. The contract worker’s lack of competence and the conflicts of interest between the contract workers and Nor-Oil, also affected the quality of the work. Costs were not shown to be important for the project outcome, and did not influence the level of success in the project. The flow experience was a highly individual experience, and can be interpreted in many ways. Therefore, whether the workers experienced flow or not, was not a prerequisite for success in project Alpha.

Other success factors identified in the analysis can be used to determine the level of success of the project. One of these is the end customer. The end-customer appeared to be satisfied with the product, and thereby project Alpha was a success.

In this thesis we showed that some environmental cues were more important for achieving efficient work rhythms and flow than others in project Alpha. These were planning, meetings and the AoC. We were surprised that some of the dimensions of temperamental job-fit are not perceived as very important for the work rhythm and flow of project Alpha. These are multitasking and work vs. non-work. Success based on the traditional indicators: quality, cost and time, ended up not being the most appropriate indicators of success for project Alpha. Planning and end-user satisfaction were more appropriate indicators for this specific project.

Based on the case study, we have some recommendations that we believe can contribute to increase the work rhythm and flow for projects similar to project Alpha. These are:

- Clear and updated organisational matrix and the organisation of projects.
- Clear and updated schedules, plans, work tasks and the scope of the work.
- Structured meetings with a clear and concise agenda, which is followed during meetings.
- Summarising the meetings at the end, and distributing clear and short meeting minutes afterwards.

This thesis has pointed out some topics that can be studied in more detail related to work rhythm, flow and success in organisations or projects. For future studies on this topic, we suggest that other researchers with larger resources and available time can go more in depth, using fewer variables and multiple cases and units. These cases can for instance be in different industries and public organisations, private organisation or NGOs. From such studies, it would be possibilities to gain a more complete picture of the phenomenon and to generalise findings more than we are able to do in this study.

Another approach can be to use other indicators of success than the ones used in this thesis. It would also be interesting to study a project which is more structured and straight forward than project Alpha, to see whether or not it is the mindset of the workers and organisation that affect the work rhythm and flow.

Bibliography

Adam, Barbara. (1995). Timewatch: The Social Analysis of Time. *Cambridge, UK: Polity*.

Ancona, D.G., & Chong, C.L. (1992). *Entrainment - Cycles and Synergy in Organizational Behavior*: Alfred P. Sloan School of Management, Massachusetts Institute of Technology.

Ancona, Deborah, & Chong, Chee-Leong. (1996). Entrainment: Pace, Cycle, and Rhythm in Organizational Behavior. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior* (Vol. 18, pp. 251-284): An Annual Series of Analytical Essays and Critical Reviews. Greenwich, Conn. and London: JAI Press.

Avots, I. (1984). Information systems for matrix organisations'. In D. Cleveland (Ed.), *Matrix management systems handbook*. New York: Van Nostrand Reinhold.

Baker, B.N, Murphy, D.C, & Fisher, D. (1988). Factors Affecting Project Success. In D. I. Cleland & W. R. King (Eds.), *Project Management Handbook* (2 ed., pp. 997). New York: Van Nostrand Reinhold.

Ballard, Dawna I. (2009). Organizational temporality over time : activity cycles as sources of entrainment. In R. Roe, M. Waller & S. Clegg (Eds.), *Time in organizational research* (pp. 204-219). New York: Routledge.

Bliss, Edwin C. (1976). *Getting things done: the ABC of time management*. London: Elm Tree Books.

Brown, Shona L, & Eisenhardt, Kathleen M. (1997). The art of continuous change: Linking complexity theory and time-paced evolution in relentlessly shifting organizations. *Administrative science quarterly, 42*(1), 1-34.

Brøgger, Benedicte, & Salomon, Robert.H. (2013). Å jobbe med arbeidsglede - hva kan virksomheter få ut av det? *FAFO-rapport*. Oslo: Arbeidsforskningsinstituttet.

Burns, Tom, & Stalker, G. M. (1994). *The management of innovation*. Oxford: Oxford U.P.

Cleland, David I., & Ireland, Lewis R. (2010). *Project manager's portable handbook*. New York: McGraw-Hill.

Csikszentmihalyi, Mihaly. (1990). *Flow: the psychology of optimal experience*. New York: HarperPerennial.

Csikszentmihalyi, Mihaly. (1997). *Finding flow: The psychology of engagement with everyday life*: Basic Books.

De Wit, Anton. (1988). Measurement of project success. *International journal of project management, 6*(3), 164-170.

Dvir, Dov, Raz, Tzvi, & Shenhar, Aaron J. (2003). An empirical analysis of the relationship between project planning and project success. *International Journal of Project Management, 21*(2), 89-95.

Edwards, J.R. (1990). Person-job Fit: A Conceptual Integration, Literature Review, and Methodological Critique. In C. L. Cooper & I. T. Robertson (Eds.), *International review of Industrial and Organizational psychology* (pp. 283-357). Chichester: University of Virginia, Darden School.

Eisenhardt, Kathleen M. (1989). Building Theories from Case Study Research. *Academy of Management Review, 14*(4), 532-550. doi: 10.5465/AMR.1989.4308385

Ghauri, Pervez N., & Grønhaug, Kjell. (2005). *Research methods in business studies: a practical guide*. Harlow: Financial Times Prentice Hall.

Gilbreath, Robert D. (1988). Working with Pulses, not Streams: Using Projects to Capture Opportunity. In D. I. Cleland & W. R. King (Eds.), *Project Management Handbook* (Vol. 2, pp. 997). New York: Van Wostrand Reinhold.

Halaas, N, & Nakkestad, E. (2009). *Arbeidseffektivitet og innovasjon i kunnskapsintensive organisasjoner.* (Master, Universitetet i Agder), Halaas, M

Nakkestad, E, Kristiansand.

Heidenreich, J.L. (1988). Quality Program Management in Project Management. In D. I. Cleland & W. R. King (Eds.), *Project Management Handbook* (2 ed., pp. 997). New York: Van Nostrand Reinhold.

Jacobsen, Dag Ingvar. (2005). *Hvordan gjennomføre undersøkelser?: innføring i samfunnsvitenskapelig metode*. Kristiansand: Høyskoleforl.

Knudsen, Harald. (2012). *Agility, flow and innovative capacity: Time-related temperaments and rhythms in Knowledge intensive work environments*. University of Agder.

Knudsen, Harald, & Mydland, Øyvind. (2013). Integrated Operations and Innovation. In H. C. G. Johnsen & Ø. Pålshaugen (Eds.), *Hva er innovasjon? Perspektiver i norsk innovasjonsforskning* (pp. 344). Oslo: Cappelen Damm Akademisk.

Lim, C. S., & Mohamed, M. Zain. (1999). Criteria of project success: an exploratory re-examination. *International Journal of Project Management, 17*(4), 243-248. doi: http://dx.doi.org/10.1016/S0263-7863(98)00040-4

Miles, Matthew B., & Huberman, A. Michael. (1994). *Qualitative data analysis: an expanded sourcebook*. Thousand Oaks, Calif.: Sage.

Munns, AK, & Bjeirmi, Bassam F. (1996). The role of project management in achieving project success. *International journal of project management, 14*(2), 81-87.

Nakamura, Jeanne, & Csikszentmihalyi, Mihaly. (2002). The concept of flow. *Handbook of positive psychology*, 89-105.

Orlikowski, Wanda J, & Yates, JoAnne. (2002). It's about time: Temporal structuring in organizations. *Organization science, 13*(6), 684-700.

Pérez-Nordtvedt, L., Payne, G. T., Short, J. C., & Kedia, B. L. (2008). An entrainment-based model of temporal organizational fit, misfit, and performance. *Organization Science, 19*(5), 785-801. doi: 10.1287/orsc.1070.0330

Perlow, Leslie A. (1999). The Time Famine: Toward a Sociology of Work Time. *Administrative Science Quarterly, 44*(1), 57-81. doi: 10.2307/2667031

Pinto, J.K, & Sleving, D.S. (1988). Critical Success Factors in Effective Project Implementation. In D. I. Cleland & W. R. King (Eds.), *Project Management Handbook* (2 ed., pp. 997). New York: Van Nostrand Reinhold.

Quinn, Ryan W. (2005). Flow in knowledge work: High performance experience in the design of national security technology. *Administrative Science Quarterly, 50*(4), 610-641.

Shenhar, Aaron J., Dvir, Dov, Levy, Ofer, & Maltz, Alan C. (2001). Project Success: A Multidimensional Strategic Concept. *Long Range Planning, 34*(6), 699-725. doi: http://dx.doi.org/10.1016/S0024-6301(01)00097-8

Stricker, Katie. (n.d.). The Five Stages of a Project. from http://management.about.com/od/projectmanagement/a/Five-Stages-of-a-Project.htm

Svartdal, Frode. (n.d.). Flyt – psykologi. *Store Norske Leksikon.* from http://kildekompasset.no/referansestiler/apa-6th.aspx

Söderlund, Jonas. (2010). Knowledge entrainment and project management: The case of large scale transformation projects. *International journal of project management, 28*(2), 130-141.

Walker, Gary, Naoum, Shamil, & Howes, Rod. (1999). *Determinant of project management success.".* Paper presented at the Proceedings of 15th annual ARCOM conference.

Whittaker, Steve, & Sidner, Candace. (1996). *Email overload: exploring personal information management of email.* Paper presented at the Proceedings of the SIGCHI conference on Human factors in computing systems.

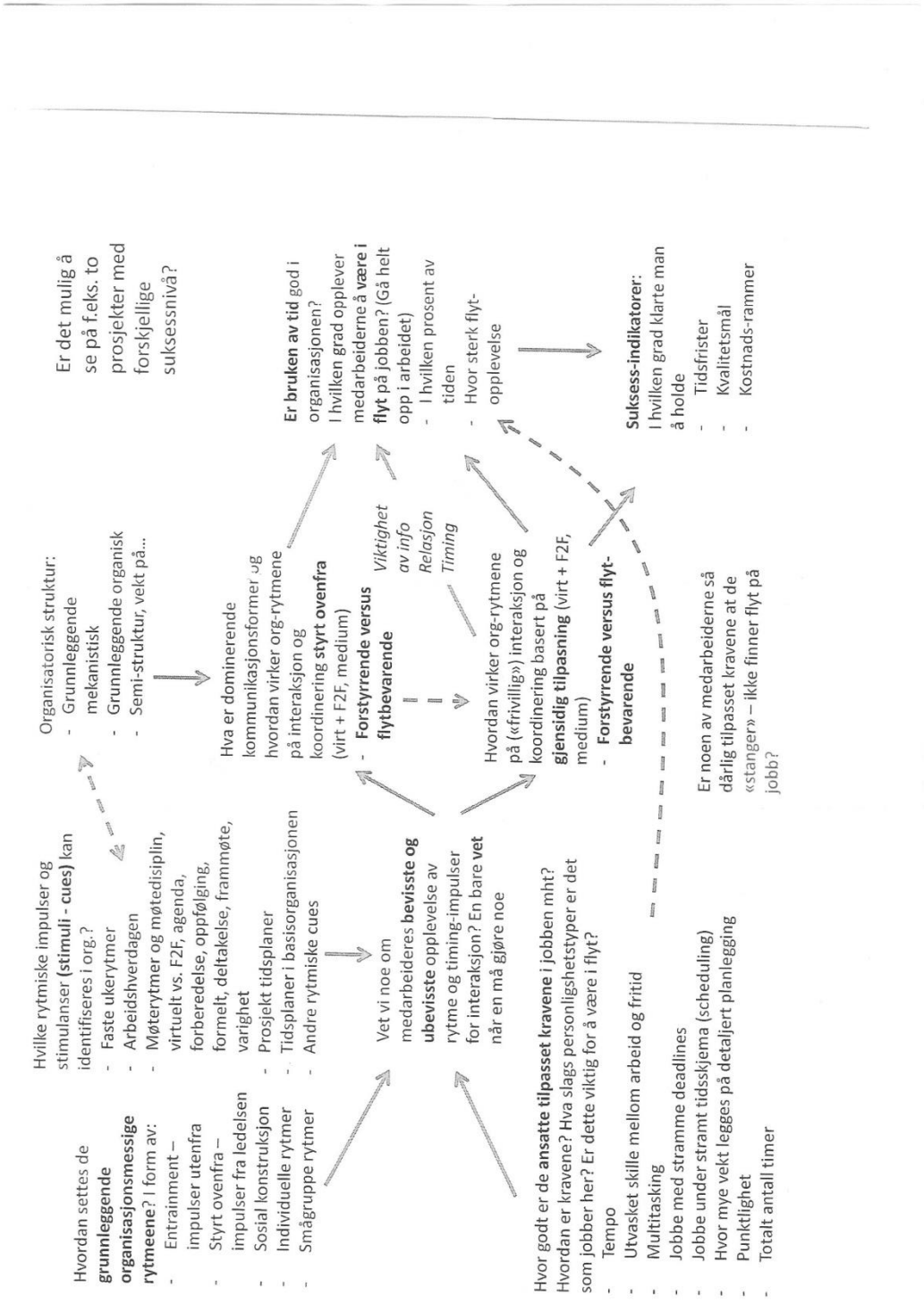
Yin, Robert K. (2009). *Case study research: design and methods* (4 ed. Vol. 5). California: Sage Publications.

Zikmund, William G., Babin, Barry J., Carr, Jon C., & Griffin, Mitch. (2010). *Business research methods*. [Mason, Ohio]: South Western Cengage Learning.

Zucchermaglio, Cristina, & Talamo, Alessandra. (2000). The Social Construction of Work Times Negotiated Time and Expected Time. *Time & Society, 9*(2-3), 205-222.

Appendix

Appendix 1: Work sheet



Appendix 2: Interview guide in Norwegian

Intervjuguide: Nor-Oil – prosjekt Alpha

Forklare formålet med intervjuet og si kort at hensikten særlig er å avklare ting som har med arbeidsrytmer å gjøre (de forskjellige begrepene forklares etter hvert i intervjuet).

Introduksjon: Om oss, om oppgaven og hvorfor vi er her.

Generelt

- Hva er din bakgrunn?
  - Utdannelse
  - Erfaring
  - Tidligere abeidsoppgaver
  - Ansvarsområder

- Hva har vært din stilling/ rolle (arbeidsoppgaver og ansvarsområder) i dette prosjektet?

- Hadde du kompetanse nok til å utføre arbeidet som denne stillingen krever?

- - Hvor lenge har du arbeidet i Nor-Oil?

  - Hvilket Nor-Oil-selskap jobber du for?

  - Hvor kom du fra da du begynte i Nor-Oil?

Suksess-faktorer

Noe i din stilling som tilsier at du vet noe om dette? Hva tenker du..?

- I hvilken grad klarte dere i dette prosjektet å holde:
  - Tidsfrister
  - Kvalitetsmål
  - Kostnads-rammer

- Hva ble prioritert høyest i prosjektet:
  - Tidsfrister?
  - Kvalitet?
  - Kostnader?

Tid og flyt

- Hvordan føler du at bruken av tid var i prosjektet?

  - Godt utnyttet
  - Dødtid
  - Ineffektiv bruk av tid

- Var du selv sliten?

  - Kolleger
  - Medarbeidere

OM FLYT: Når en arbeider med en oppgave hender det at en blir frustrert fordi en blir avbrutt eller fordi ting stokker seg. I andre perioder kan en oppleve å:

- leve seg helt inn i oppgaven
- så å si gå i ett med arbeidet
- være fullt involvert og konsentrert
- noen ganger til og med glemme tid og sted.

Det er dette vi kaller å være i flyt.

- I hvilken grad opplevde du å være i en flyt-tilstand, altså helt involvert og konsentrert, mens du arbeidet i dette prosjektet?

  - Hvor ofte
  - Hvor sterkt
  - Alene
  - Sammen med andre
  - Tilfredshet med eget arbeid. Hvis ikke, hvorfor?

Kommunikasjon og interaksjon

- Hvordan foregikk hovedsaklig kommunikasjonen med andre ansatte?

  - Personlig
  - Telefon
  - Mail
  - Video
  - Annet

- Hvordan var responsen i kommunikasjonen?

  - Tid før mail ble besvart
  - Villighet til å evt. diskutere og løse problemer
  - Hjelpe hverandre
  - Besvare spørsmål
  - Samarbeide

- Opplevde du ofte at kontakten med andre virket *forstyrrende* –
  - at du ble avbrutt i det du holdt på med
  - eller at du måtte avbryte andre i arbeidet?

- Var mye av samhandlingen med andre styrt ovenfra,
  - eller var det meste basert på gjensidig tilpasning og den enkeltes initiativ?

<u>Informasjonstilgangen</u>:

- Folk selv kontaktet hverandre for å få informasjon
- «frivillig» kom med informasjon til andre
- Via overordnede
- Koordinert av overordnede

Ansattes tilpassning – personlig temperament/tilpasning i forhold til jobb-krav og forventninger

	- Krav **- Forutsetninger** **- Forventninger** **(i prosjektet...)**	**- Trives du med dette?** **- Hvordan ville du helst ha det?** **- Hva av dette er viktig?**
Hvordan var arbeidstempoet: - Høyt - Utfordrende		
Opplevde du tidspress i forhold til deadlines?		
Ble det fulgt et stramt tidsskjema basert på en plan for hele prosjektperioden?		
Måtte du ofte jobbe med flere baller i lufta samtidig, eller kunne du konsentrere deg om en ting av gangen?		
Ble det lagt stor vekt på punktlighet i prosjektet?		
Hvor lang arbeidsuke hadde du i prosjektet – ca. hvor mange timer i uka?		
Hadde du forholdsvis regulær arbeidstid, eller ble forholdet mellom arbeid og fritid i noen grad visket ut?		

Organisatorisk struktur

Hvordan vil du karakterisere prosjektet i forhold til kategoriene nedenfor?

Kategori	**(Mekanistisk)**	**(Organisk)**	**Kommentarer**
Informasjon	Konsentrert i ledelsen	Alle var godt informert om det meste	
Ansvar	Den enkelte følte bare ansvar for det en ble satt til å gjøre	Alle følte et ansvar for å få hele prosjektet i havn og påtok seg oppgaver ut fra det	
Myndighet	Det var alltid tydelig hvem som hadde ansvar for oppgavene	Det var ofte uklart hvem som hadde myndighet og ansvar for hva	
Oppgaver	Overordnede spesifiserte i detalj hva den enkelte med-arbeidet skulle gjøre	De ansatte måtte for en stor del selv finne ut av hva de skulle gjøre og hvordan	
Koordinering	Det var ledelsens jobb å koordinere arbeidet	Det meste av koordineringen ble gjort av de ansatte selv gjennom gjensidig tilpasning	
Lojalitet	Medarbeiderne viste sin lojalitet gjennom å gjøre det de ble satt til uten å stille spørsmål	Medarbeiderne viste sin lojalitet ved å ta ansvar for helheten og gjerne stille kritiske spørsmål	
Kategori	**(Mekanistisk)**	**(Organisk)**	**Kommentarer**

Åpenhet	Man rapporterte bare formelt, vanskelig å tale åpent om problemer	Det var stor åpenhet, en kunne si hva en mente om ting	
Prioriteringer av ressurser og oppgave	Det var alltid veldig tydelig hva som skulle prioriteres og hvordan ressursene skulle brukes	Folk prioriterte oppgavene selv og satte inn innsatsen der hvor de så behov for det	
Utførelse	Det ble lagt vekt på å følge faste standarder	Folk ble bedt om å finne løsninger selv	

Stimuli (cues)

Det er ofte vanskelig å si nøyaktig hva som bestemmer rytmen (arbeidsrytmen i et prosjekt).

Kan du si noe om hvordan du opplevde de følgende **rytmiske faktorene**:

Faktor	**Hvordan fungerte dette i prosjektet?** **Var dette aktuelt?**	**Hvor mye betydde denne faktoren for arbeidsrytmen i prosjektet?**
Pendling mellom arbeidssted og hjemsted		
<u>Arbeidstid</u>: - Fast arbeidsuke - Antall timer - Fleksitid - Overtid		
Hadde alle samme arbeidstid?		
<u>Uke-rytme</u>: - Faste innslag i løpet av uka (mandag morgen – fredag ettermiddag)		
<u>Dags-rytmer</u>:		

- Faste tider for lunch - Kaffepauser - Kontakt med andre i løpet av dagen		
<u>Møtetidspunkter</u>: - Faste møter - Tilfeldige møter		
Faktor	**Hvordan fungerte dette i prosjektet? Var dette aktuelt?**	**Hvor mye betydde denne faktoren for arbeidsrytmen i prosjektet?**
<u>Møtedeltagelse</u>: Var alle som ble innkalt tilstede på møtene? Deltok de i samtalene?		
<u>Møterytme og viktighet</u>: Var møtene viktige med tanke på forberedelser og oppfølging – var det møterytmen som satte rytmen i prosjektet?		

Organisatoriske rytmer

Hvordan vil du beskrive rytmen i ~~arbeidet~~/ prosjektet? (god/ dårlig/ individuelt, i grupper)?

- Følte du at det var en god arbeidsrytme i prosjektet?
- Hvor viktig føler du det er å ha en god rytme i arbeidet i et slikt prosjekt?
- Hvilke faktorer vil du si påvirket rytmen i ~~arbeidet~~/ prosjektet (både individuelt og gruppevis)?
    - Var det hovedsakelig prosjektledelsen som satte arbeidsrytmen i prosjektet?
    - Var det faktorer eller personer utenfor prosjektet som langt på vei bestemte arbeidsrytmene («entrainment)?

- Eller vil du si at arbeidsrytmen eller organisasjonsrytmen i prosjektet først og fremst var et resultat av rytmen til de som jobbet i prosjektet – gjennom arbeid og interaksjon («sosial konstruksjon»)?

Til slutt: Vil du si at arbeidsrytmene i dette prosjektet var veldig ulike/forskjellig fra andre / tidligere prosjekter / hvordan du tidligere jobber?

Takk for at du tok deg tid til oss ☺

Appendix 3: Interview guide in English

Interview guide: Nor-Oil – Project Alpha

Describe the aim of the interview. Describe the purpose of our thesis, and that we want to determine some areas regarding work rhythms by using project Alpha as case. Relevant terminologies will be described during the interview.

Introduction: About us, the case, and why we are here

General

- What is your background?
  - Education
  - Experience
  - Former work tasks
  - Areas of responsibility

- What are your position/ role (work responsibilities) in this project?
- Do you have the qualifications required for your position?
- Do you know how your company was given this project? Were you contacted as a sole supplier or was there a tendering phase?
- How long have you worked in Nor-Oil?
  - What part of the Nor-Oil-company do you work for?
  - Form where did you come from when you started in Nor-Oil?

Success factors

Something in your position that indicates that you know something about this? What do you think…?

- To what degree did the project manage to:
  - Keep to deadlines?
  - Maintain quality?
  - Cost limits?
- What was given top priority in the project:
  - Deadlines?
  - Quality?

- Cost?

Time and flow

- How do you feel that the use of time was managed in the project?

  - Good
  - Dead time/ down time
  - Inefficient use of time

- Were you tired in the work?

  - Colleagues?
  - Co-workers?

About flow: When working on a task one might be frustrated due to interruptions or arising challenges. However, at other times you may feel that you:

- focus completely on the task at hand
- become one with your task
- be fully involved and concentrated.
- sometimes even forget about time and place

This is what we describe as being in "flow".

- To what extent did you experience to be in state of flow, which means to be "fully involved and concentrated", when you worked with this project?

  - How often
  - To what degree
  - Alone
  - Together with others
  - Satisfaction with your own work. If not, why?

Communication and interaction

- How did you primarily communicate with other co-workers?

  - Face to face
  - Phone
  - E-mail
  - Video
  - Other

- How was the response?

  - The time it took to get a reply to an email
  - Willingness to discuss and solve problems
  - Helping each other
  - Answering questions
  - Collaborate

- Did you often experience contact with others to be *"disturbing"?*
  - were you interrupted in your work
  - did you have to interrupt others in their work?

- Was much of the interaction with others guided from "above"?
  - or was it based on individual initiative and adaption to the needs of others

Access to information:

- Did employees take personal initiative to gain information?
- "voluntarily" shared information whith others
- Via superiors
- Coordinated by superiors

Employee adaption – temperamental job-fit in relation to the expectations and demands associated with work

	- Demands - Prerequisites - Expectations (in the project...)	- Is this something you enjoy doing? - How would you prefer to do it? - Which of these do you consider the most important?
How did you find the work tempo? - High - Challenging		
Did you experience time pressure regarding deadlines?		
Was there a tight schedule that was kept for the whole project?		
Were you required to balance several different tasks at the same time or were you able to focus on your tasks one at the time?		
Was punctuality a focal area in the project?		
How long was your working week in this project, given in an approximate number of hours?		
Did you have regular working hours, or was the difference between work and non-work time blurred to a certain extent?		

Organisational structure

How would you characterize the project related to the categories listed below?

Category	(Mechanistic)	(Organic)	Comments
Information	Concentrated in the top management	Everybody was informed	
Responsibility	The individual only felt responsibility for his/her own work tasks	All the workers felt that they had a collective responsibility to finish the project and undertook different tasks	
Authority	It was always clear who had responsibility for the different tasks	It was often unclear who had responsibility for the different tasks	
Tasks	Superiors specified in detail what the employees should do	The employees themselves had to find out what their tasks were, and how to solve them	
Coordination	It was the management's responsibility to coordinate work	Most of the coordination where done by employees through mutual adaption	
Category	**(Mechanistic)**	**(Organic)**	**Comments**
Loyalty	Employees showed their loyalty by performing their job without questioning.	Employees showed their loyalty by taking responsibility for the whole project and ask critical questions	
Openness	One reported formally, and there was hard talk openly about problems	It was tolerated that you could speak out and say your opinions	

Prioritizing regarding tasks and resources	It was always clear what that should be prioritized and how resources should be used.	The employees themselves chose what should be prioritized and directed work/effort where it was needed.	
Performance	The use of fixed standards was emphasized	Employees had to find their own solutions	

Stimuli (cues)

It's difficult to tell what influence work rhythm in a project.

Can you tell how you experienced these **rhythmic factors:**

Factors	**How did this work in the project? Was it relevant?**	**How crucial were this rhythmic factor?**
Commuting between work and home		
<u>Work hours:</u> - Fixed work week - Number of hours - Flexible working hours - Overtime		
Were there common work hours for all the employees?		
<u>Week rhythm:</u> - Fixed occurrences during the week (Monday morning - Friday afternoon).		
<u>Daily-rhythm</u>: - Fixed time for lunch break - Coffee breaks - Meetings/ contact with		

colleagues during the day		
Time of meetings: - Fixed meetings - Random meetings		
Attendance: Did everyone who was invited attend the meetings? Did they participate in conversations/discussion?		
Meeting rhythm: Were the meetings important for preparation and follow-up – Did the meeting rhythm set the rhythm in the project?		

Organisational rhythms

Rhythms: Rhythms exists around us at all times. These may be individual or in cooperation with others. For instance when a person is skiing, there is a flow and rhythm between arms and legs. Music is also based on rhythms, which in an orchestra is managed by the conductor.

In theory, a good rhythm leads to flow.

Entrainment: Entrainment set and describes the rhythm. This is when an external factor sets and determines how you should work. This can happen consciously or unconsciously.

Social construction: Affects and describes the rhythm. This is when the workers in the project collaborate, a natural rhythm is then created. Here, the rhythm is not set, but appears naturally.

How would you describe the rhythm in the project (good/bad/individually, in groups)?

- Did you feel that there was a good work rhythm in the project?
- For you, what was the importance of having a good rhythm in this project?
- Which factors would you say affected the rhythm in the project (individually and group-wise)?
    - Did the project management mainly set the work rhythm in the project?
    - Were there factors or people outside the project who influenced work rhythms (entrainment)?
    - Or would you say that the work rhythm or organisational rhythm in the project mainly was a result of the rhythm of the people that work in the project – through work and interaction (social construction)

- Would you say that the work rhythms in this project were very different from what you have experienced in previous projects or companies?

Thank you for your time ☺