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# Organisational Effects of the Equinor STEP Programme

*A Qualitative Study*

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This thesis was written as a part of the Master of Science in Economics and Business Administration at NHH. Please note that neither the institution nor the examiners are responsible – through the approval of this thesis – for the theories and methods used, or results and conclusions drawn in this work.

## Executive Summary

In 2014 oil prices plummeted by more than 40 pct. (Giles, 2016). The whole industry was forced to restructure to meet the new reality of lower oil prices. Equinor, earlier Statoil, launched the Statoil Technical Efficiency, here forth STEP, programme to meet the new reality. With six sub-projects, the STEP programme aimed to cut cost by 30 pct. At large, the STEP programme was one extensive standardisation and industrialisation programme. (Aadland, 2015)

The STEP programme has only recently been completed. Great parts of Equinor are large organisations, run with a long time horizon, where changes take time to unveil its full effect. With this in mind, the study needed to pinpoint divisions of the company where changes were likely to become evident at an early stage, and perhaps inflict greater or more visual impact. Project divisions were found to be fitting to such a description.

This paper studies the organisational effect of the STEP programme in Equinor project organisations. It does so by a series of semi-structured interviews with employees in three different project organisations. The aim of the paper is to continue the literature-study by Blindheim and Ryland (2015), and to evaluate the current effect of the STEP programme to supply grounds for learning and possible corrections.

The study has sought to explore perceived differences in four categories; Efficiency, changed workday, involvement and quality delivered.

The study found that the STEP programme has been effective in what is its main goal, increased efficiency e.g. cut cost. However, the increased efficiency can hardly be ascribed to different workday routines for the employees. It is rather the result of a changed focus in the organisation, along with better cooperation with contractors, as well as some improvements in the TR system and some reduced robustness and redundancy of chosen solutions. Equinor has limited the involvement by employees some, and that has resulted in some STEP efforts not reaching their full potential.

## Acknowledgements

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I would also like to extend my gratitude to the interviewees in this study. They all, willingly, found the time to discuss the subjects I wanted to look at. Not only were they able to find time for an interview in a busy schedule, but, they shared their experiences, opinions and views beyond my expectations. I would truly not have been able to put together this study without their contribution.

Equinor provided all the interviewees, and I am very thankful for Equinor allowing me to perform my study without restrictions. The company helped me to find suitable interview candidates and my supervisor Svein Frantzen helped me get in contact with the candidates needed. It goes without saying that a study of Equinor would have been impossible without the help from them.

Finally, the thesis by Ingrid Ryland and Thor Blindheim of 2015 has been of utmost importance to my work. Their work has provided the basis for this paper. I hope my work can be a valuable addition to their hard work.

Bergen, June 2018

Andreas Hundvin

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## Abbreviations

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<i>Abbreviations</i>	<i>Explanation</i>
<b>STEP</b>	Statoil technical efficiency programme
<b>TR(s)</b>	Statoil technical requirements
<b>NCS</b>	Norwegian continental shelf
<b>OMM</b>	Offshore maintenance and modifications
<b>Ptil</b>	Petroleum safety authority Norway
<b>CVP</b>	Capital value process. A decision process system for investment projects
<b>DG 0,....,5</b>	Decision Gate in the CVP system. Stages in the project management process. From business development (DG0) to operation/ completed project (DG5)
<b>ISO</b>	International organisation for standardisation
<b>NOROG</b>	Norsk olje og gass. The Norwegian Oil and Gas Association
<b>FEED</b>	Front end engineering and design
<b>OPEC</b>	Organisation of the Petroleum Exporting Countries

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# 1. Introduction

In 2014 the oil price dropped from a stable 100 \$/bbl. to below 40 \$/bbl., in just a few months (Giles, 2016). The high oil prices of years previous to august 2014 made oil producers across the world increase their oil production. OPEC, the cartel of oil producing countries adjust their production to regulate oil prices to avoid large fluctuation in the oil prices, and has functioned as a market regulator for decades. The high oil prices previous to august 2014 made countries both inside and outside the OPEC scale up their oil production, and made complicated and unconventional oil resources profitable to develop. New oil flooded the market, and the OPEC had to cut production to maintain stable prices. OPEC, and especially Saudi Arabia, finally got tired of cutting their production, in order to maintain high prices, and decided to flush the market with oil. Consequentially oil prices dropped. They did this to squeeze out the free riding producers that where producing oil resources with significantly higher production costs. (Giles, 2016)

The oil industry was booming previous to the oil price drop. The oil producing companies hired, explored and invested. Costs were spiralling both due to scarcity in the supplier market, growing organisations and development of smaller, more complicated and less profitable oilfields.

With the oil price drop, the companies in the oil industry were forced to cut cost and become more effective. One of the initiatives often sought to in demanding times is standardisation and industrialisation, as it cut cost (Avery, 1998, p. 203). However, the organisational effects of standardisation of work processes have hardly been studied, and there is a need for further knowledge on the subject

## 1.1 Previous Work

In the spring of 2015 Thor Blindheim and Ingrid Ryland studied the literature on challenges in standardisation of work processes in organisations (Blindheim & Ryland, 2015). Ryland and Blindheim made an industry study and immersed in Equinor and the STEP programme, which is the interest of this study. The study by Blindheim and Ryland is the base for this paper. In their concluding part, Blindheim and Ryland pointed out the need for further research on the subject, and advised on a quantitative study to verify their findings (Blindheim & Ryland, 2015, p. 66). This paper aims to continue the work by Blindheim and Ryland.

## 1.2 The STEP Programme

In response to the spiralling costs and the oil price collapse, Equinor launched the STEP programme in 2014. This in order to cut cost by 30 pct. (Aadland, 2015). Media has characterised the STEP process as the greatest savings initiative ever embarked upon in Norwegian business and industry. (Ånestad & Løvås, 2014)

The STEP programme aims to change the way the company works with six key projects. One of the six key projects is named standardisation and industrialisation, and it would seem like a great part to focus on. However, isolating and pinpointing what results are caused by, or to what degree they are caused by, that key project, proved to be very challenging. When looking at the projects and the sub categories it becomes evident that most of them are closely linked to standardisation and/or industrialisation efforts (See p. 8). A broader perspective has been chosen both to simplify the analysis and to prevent the analysis from ascribing effects to the wrong parts of the programme. Hence, a broader view, and a holistic approach to the STEP programme has been chosen in this study.

The STEP programme's aim is to cut cost. The field of interest in this study is what other effects the programme cause. While there is little doubt that cost development will be evaluated thoroughly, the evaluation of organisational effects caused by the programme might not be as detailed. In order to prevent actions of today causing problems in the future, any change initiative needs to be evaluated (Kotter, 1996). Especially programmes as extensive as the STEP programme.

This study aims to unveil organisational effects caused by the STEP programme. This study combines the study of effects with a contribution to the continuation of the work done by Blindheim and Ryland.

As mentioned the STEP programme is extensive, on the next page there is a complete map of the programme with the six main projects and the sub-projects, or named activities in each of the six projects.



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## 1.2.1 The STEP Programme Map

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<i>Project</i>	<i>Activity name</i>
<b>End-to-end well delivery</b>	<p>Set cost-per-well targets for offshore wells</p> <p>Implement rig activity changes</p> <p>Develop standardised well concepts</p> <p>Launch first efforts to reduce plug &amp; abandon time/cost with 50%</p>
<b>Strengthen early phase</b>	<p>Right solution first time</p> <p>Design to cost rigs</p> <p>Design to cost project development</p>
<b>Standardisation and industrialisation</b>	<p>Simplify TRs and reduce operation and maintenance requirements</p> <p>Standardise and industrialise topside equipment</p> <p>Standardise and industrialise subsea production systems for NCS</p>
<b>Enabling OMM excellence</b>	<p>Increase efficiency in execution of modification projects</p> <p>Double “time-on-tool” through LEAN methodology</p> <p>Establish time lines and governing documents for predictive maintenance/ condition-based maintenance.</p> <p>Inventory management for warehouses</p> <p>Subsea aftermarket</p> <p>Improve the way we drive production per asset</p> <p>Improve our long term shut down strategy, planning and execution</p>
<b>Supplier management and efficiency</b>	<p>Strengthen contract management through shared cost targets</p> <p>Improved follow-up of supplier related quality incidents</p> <p>Increase business line purchasing discipline through supply chain competence building</p>
<b>Simplification and resource prioritisation</b>	<p>Increase technical resource productivity</p> <p>Drive prioritisation of technology portfolio</p> <p>Improved quality and more efficient use of technical condition and safety and technical integrity management programme</p>

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*Source: (Aadland, 2015)*

## 1.3 Research Question

The objective of this study is to explore the organisational effects of the STEP process. Covering all the effects of the STEP programme would be too comprehensive to study in a single master thesis. Therefore, this paper aims to cover organisational effects of the STEP programme, e.g. effects in the Equinor organisation.

Furthermore, the paper narrow its search to the project organizations of Equinor. Because of the nature of project organisations with a relatively short timeframe, clear goals and visual results (Kotter, 1996), the hope is that this will help make effects more visible than in other parts of Equinor, but still useful across the company. With all this in mind, the paper try to answer the following research question:

*“What organisational effects occurs in Equinor project organisations as a consequence of the STEP programme.”*

This paper use the phrase “organisational effects” as the effects, other than cutting cost, that accrue in the Equinor organisations as a consequence of the STEP programme. Even though the effects of the STEP programme go beyond the limitations, this paper focus on the effects along four axis: the efficiency of the projects, the effect on employee workday, employee involvement, and project quality delivered. The study measure those effects by looking at how the employees of Equinor perceive that the STEP programme effect those four subjects.

The findings of this study can be linked to the work by Blindheim and Ryland (2015). By matching the theory study by Blindheim and Ryland to the empirical findings in this paper, you either strengthen or weaken the theories, and add to the credibility of the field of study. And thereby provide valuable knowledge on the subject.

### **1.3.1 Axis:**

#### *Efficiency*

The key objective of the STEP programme is to cut cost (Aadland, 2015). One of the key factors in cutting cost is increased efficiency (Davenport, 1993). As seen on page 9, most of the initiatives of the STEP programme are about increasing efficiency. In this study, the focus is; to which extent the employees perceive an increased efficiency. How the employees perceive the efficiency effect has the potential to affect their attitude towards the programme.

E.g., I do not see any increase in efficiency; therefore, the program must be failing. The attitude of the employees will determine their commitment to the STEP programme, which is important to a successful change initiative (Kotter, 1996).

### *Changed Workday*

Any change implemented should be measured on the ability to change the way the employees work. J.P. Kotter (1996) argues, that if a change initiative does not change the way people work, there has not been any actual change. Thereby the perceived change in daily routines, and how people work in an organisation, is a good indicator of actual change. Hence, if the STEP programme has actually achieved what it aimed to do.

### *Involvement*

Initiatives with employee involvement has a much higher rate of success than those who do not (Devos, 2007; Lines, 2004). Especially in Norwegian work culture, employee involvement is expected (Hofstede, n.d.). To which extent the employees feel involved in the process can be an indicator of the probability of a successful initiative. It will also indicate whether to expect resistance in the organisation or not. Change initiatives are often subject to great internal resistance. Resistance is often a reaction when met with a new and uncertain situation, the uncertainty cause employees to react negatively to changes (Morgan & Zeffane, 2003).

Involvement has the potential to reduce uncertainty, as the employees are closer to the process and probably better informed. Involvement also let the employee feel like they have greater control of the situation, as they can voice their opinion and contribute to the choice of solution. Finally, involvement might make the employees take ownership in the process, something that will make their attitude towards the process change. Hence, involvement has the potential to have a positive effect on employee perception of the STEP programme. Finally, employee involvement, and their contribution, are often valuable (Morgan & Zeffane, 2003).

### *Quality Delivered*

While the company might have to choose cheaper solutions to cut cost, it is important that the quality delivered be within acceptable boundaries for the employees. If the management force employees to implement solutions that they do not approve of, it will have negative effects on their attitude towards the project and towards their job and company. Something that could affect the successfulness of the project. If the employees feel like there is a decrease in the quality of the projects, it can indicate solutions that in the future are less able to cope with

changed circumstances. (Decreased robustness, ability to cope with e.g. increased water cut, reduced reservoir pressure, higher gas cut and new resources found etc.) Moreover, it can indicate poorer material quality, decreased lifetime of equipment, more manual solutions, lack of plant redundancy. Which would indicate increased maintenance cost, higher operating cost, decreased ability to seize future possibilities and in conclusion reduced lifetime and/or higher lifetime cost (Nilsson & Bertling, 2007).

## 1.4 Disposition

In the next chapter the study will explore the theory relevant to the organisational effects of the STEP programme. While the theory study by Ryland and Blindheim (2015) is basis for this paper, this study has chosen a different approach to relevant. Blindheim and Ryland aim to give a broader validity to their paper, which makes their relevant theory different from the relevant theory in this study. In addition, a mere reproduction of the theory gathered by Ryland and Blindheim would reduce the value of this study. There are however parts of the theory basis of the two papers that overlap, and the overlapping theories is not emphasized in this paper.

Next comes the methodology chapter. It gives a thorough walkthrough of chosen methodology approach to the research question. The paper also try to give an explanation to why current methodology approach has been chosen. Data gathering is also covered in the methodology chapter. The chosen methodology is like every other methodology subject to criticism and weaknesses. Weaknesses specific to this study is also accounted for.

Findings and analysis link the interviews to the relevant theories. The interviews are compared to each other to find traits, opinions and experiences that are repeated across the interviews or if there are differences in what the interviewees have experienced. The paper organise the analysis under each of the subjects; effectivity, changed workday, involvement and quality delivered. This is done to make the paper reader friendly. The findings are analysed to explore what can be drawn from the findings in the interviews. The analysis is organised by the four axis to make a comprehensible overview and visible findings.

In the conclusion chapter findings are summarised and systemised to make them more visual. On the basis of theory, analysis and findings, recommendations are given. Next, an answer to the research question is given. In the second part of the conclusion chapter recommendation

advise Equinor on the STEP programme, list positive experiences, and try to propose solutions to negative experiences. Finally the paper suggest on further research, based on the findings of this study.

In the appendix you will find the interview guide and the information sheet that was handed out to the interviewees of this study. This is supplied to give the reader a view of how the interviews have been done.

The bibliography supply a list of all of the sources the study have used in the process of researching our subject.

## 2. Theory

The theory section is at large influenced by the work by Blindheim and Ryland (2015), their paper makes a thorough listing of theory in this paper redundant. However, the central subjects of standardisation are listed to provide a framework for the reader. Standardisation has to be explained, and the systems that are used by Equinor to standardise work processes also needs explaining in order to understand the findings in the interviews.

This paper has a higher focus on employee motivation and change, than the paper by Blindheim and Ryland (2015), the theories linked to those subjects are given a more thorough review in this paper.

The hope is that motivation and change theory can add to the knowledge collected by Blindheim and Ryland (2015). The paper adds knowledge by broadening the view on the subject, by the addition of empirical data.

### 2.1 Previous Research

As stated by Blindheim and Ryland, there is little research on standardisation of work processes, especially in an organisational context. Blindheim and Ryland has gathered the known literature on the subject to make it easier to comprehend the subject. Their study is a literature study. Hence, there are no known qualitative or quantitative study on the subject.

In their study Blindheim and Ryland (2015, p. 62) found a set of challenges specific to the oil and gas industry, of which Equinor is a part of. They name four challenges when standardising work processes in organisations like Equinor:

#### Loss of Autonomy

Autonomy is often challenged by standardisation. The organisations of Equinor often have the perception of high autonomy. Blindheim and Ryland (2015, p. 62) argue that this can be an issue when implementing new standards. This study found that autonomy was too much of a foreign concept to the interviewees, limiting their responses. This research weaved the questions on autonomy into the subjects chosen in this study, especially the part on quality delivered.

## Employee Involvement

In their study, Blindheim and Ryland found that employee involvement was complicated to balance. This paper aims to explore if the employees feel like they and their organisation have been involved in the STEP process. The paper compare the perceived involvement with theory and try to find how it correlates to their general opinion on the STEP programme. That might help explaining why the STEP programme, or an equal programme, has the result it has.

## Standard Flexibility

Blindheim and Ryland found that organizations in the oil and gas industry needed to balance the need for standardisation and flexibility within the standards. Though not an explicit subject in the interviews, how the standards function and how the interviewees perceive them, reaccurs and are central subjects in the entire interview.

## Standardisation and Downsizing

Increased efficiency and cut in cost can also result in need for fewer employees in the organisation (Blindheim & Ryland, 2015). Downsizing parallel to a standardisation effort can interrupt the standardisation effort. Though a highly relevant subject downsizing has not been studied in this paper. Limiting the paper and adjusting the study to make good interviews and thorough research was one of the greatest challenges in this study. Further research on the industry should include downsizing while standardizing in the study.

## 2.2 Standardisation

The second industrial revolution and its mass production powered by conveyor belt production and standardised products started the industrialisation trend. Especially in times of hardship, standardisation is used as a tool to make companies more competitive. Standardisation yield benefits such as increased efficiency, increased control and higher efficiency, higher predictability and improved communications across the company (Davenport, 1993; Jang & Lee, 1998; Lillrank, 2003; Urgan, 2006)

There is a maze of different definitions of what standardisation is, but in simple terms, it is about assuring a uniform execution of work processes across the company. “Standardisation is a deliberate attempt by an organisation to develop, ratify and implement standards among stakeholders” (Gao, Yu, & Lyytinen, 2014).

The central structure of standards in Equinor is ARIS, Best practises and Technical requirements, here forth TR. These three are to cover and guide every company operation to secure that operations are executed as intended.

As a tool to manage its spiralling costs, Equinor uses standardisation. Theoretically, standardisation will contribute to a reduction in the autonomy of the employees (I. Stensaker, Nesheim, Olsen, Tharaldsen, & Kjærland-Haga, 2009).

However, standardised work processes are needed in the context in which Equinor operates. The consequences of errors in the oil industry, and especially the offshore oil industry, are tremendous, both to the people who work on the Equinor facilities and the environment. This, alongside a media focus on the industry, makes it crucial for Equinor to eliminate as much as possible of the risk in their operations.

The need for strict HSE focus has generated a comprehensive set of governing documents, both in the industry and in Equinor. But, if the governing documents become too comprehensive it might end up having the opposite effect of what was intended. Studies have found that the industry, and Equinor, have too many regulations that contribute to complex and bureaucratic processes (Stensaker et al., 2009). Strict focus on HSE, and a strong government, has added to the issue, and the anxiety, of not being in compliance with Ptil demands result in too many and poorly conceived measures (Hansen et al., 2012). Mintzberg (1979), describe a situation that seems fitting to how bureaucracy is growing in the industry, «rules are applied, workers resist, dysfunctional consequences arise, further rules are applied to control the resistance, the workers thereby lose more discretion in their work, they resist further, and so on.»

As stated by Blindheim and Ryland (2015), a balanced standardization of work processes is needed. Flexible enough to be adaptable to local conditions and rigid enough to ensure uniform execution of work processes, without adding too much bureaucracy and destroying innovation. The interviewees, their experiences and their attitude towards the STEP programme will indicate whether or not Equinor has managed just that.

### **2.2.1 ARIS**

ARIS (ARchitecture of integrated Information Systems) is a business process modelling tool, Equinor has adopted the system across its organisation. In Equinor ARIS provides a complete library covering every work process in the company. ARIS cover the responsibilities of every



role in the execution of any operation and makes a map of the operations that can be followed from planning to execution. Within each operation requirements that have to be followed are found. The requirements often link to the Best practises, and the TRs. A basic understanding of ARIS, best practices and TRs are required for the reader to follow the analysis of the interviews.

### **2.2.2 Best Practices**

Best practises are detailed job execution receipts found in ARIS. Equinor aims to make best practices for every regularly accruing job, across the company. Best practices are usually made by, or in corporation with, executing personnel, assuring that the practice is suitable for the job (Blindheim & Ryland, 2015, p. 25). The best practices are made to ensure uniform execution of equal operations. This will benefit efficiency as employees do not have to consider how to do the operation every time it is executed. It also assures that each employee performing the same task use the most efficient solution. Finally, with complicated operations, the best practices reduce the risk of errors (Blindheim & Ryland, 2015, p. 25).

### **2.2.3 TR**

The library of TRs specify the technical requirements in Equinor. Those requirements specify the technical demands to any object in the company. Equinor made the TRs based upon experience. Though you have Norsok and ISO standards across the industry who often overlap the TRs, they are often of a more general sort, and not always detailed enough. ISO and Norsok do not necessarily consider the experiences made by Equinor, and while a steel cable gate might withstand the mechanical requirements to support cables, it will rust away in a few years in the humid, salty sea air offshore. Equinor is not in control of Norsok nor ISO standards, they might not agree with every standard set by an external part. Though the TR standards do not compromise the Norsok nor the ISO standards, TR requirements are more detailed, bring Equinor in control of their requirements, and let them harvest their experience in an easier way. An insight to the Technical requirements is needed for understanding further discussion.

## 2.3 Change Theory

A programme as extensive as the STEP programme will bring about change for the employees. Blindheim and Ryland (2015, p. 62) identify a set of challenges that Equinor has to be aware of when standardising. The challenges identified by Blindheim and Ryland are very similar to those identified in the change theory. In fact, the STEP programme can very well be identified as a change initiative. The program is implementing measures that aim to cut cost by 30 pct. Which implies a radical change in how the organisations are organized and how they work.

J. P. Kotter (1996) has formulated the 8-step change model, which is applied in this paper. There is a range of change models and theories, Kotter's 8-step change model is one of the most renowned, and seems applicable in this study of the STEP programme, and is therefore chosen.

### *Step 1: Create Urgency*

Kotter argues that if a change is to happen it will be of great help if the entire company wants the change. In order to create the wanting for change you need to create urgency for change.

### *Step 2: Form a Powerfull Coalition*

Identify powerful people in the organisation, convince them that change is necessary and form a team. The team will build urgency for change across the organisation.

### *Step 3: Create a Vision for Change*

Make a clear strategy of what the change process is to achieve. The vision needs to be easily explainable and understandable to everyone in the organisation.

### *Step 4: Communicate the Vision*

The vision needs to be implemented in the organisation, and that is done by communicating it as often as possible. Not by formal meetings, but by talking about at every possible occasion and acting like role models.

### *Step 5: Remove Obstacles*

Identifying if there are negative perception on the change process is important. It needs to be addressed to prevent it from spreading in the organisation.

### ***Step 6: Create Short-Term Wins***

Try achieving some positive effect of the change as soon as possible. This will motivate the staff. Not achieving positive effect at an early stage can create room for negativity and criticism.

### ***Step 7: Build on the Change***

Kotter argue that many change initiatives fail as the projects at a too early stage are declared a success. It is important to build on the early wins to achieve the long term goals and don't declare the success of the change initiative too early.

### ***Step 8: Anchor the Changes in Corporate Culture***

For the change to become permanent it has to become a part of the corporate culture. This requires continuous efforts and takes a long time.

Kotter (1996) especially emphasise the role of middle management in change initiatives. They should be identified in step 2. and play a crucial role in avoiding resistance, communicating the vision and removing obstacles. If not involved middle management can become part of the obstacles.

Though Kotter (1996) emphasise that involvement is important, studies on Equinor have concluded that broad involvement in planning phase does not necessarily contribute to a more efficient implementing phase (Stensaker & Langley, 2010). Hence, a balanced approach should be considered.

## **2.4 Employee Motivation**

Equinor still dependent on employee motivation, as motivation is key to employee performance (Deci, Koestner, & Ryan, 1999). Blindheim and Ryland (2015) focus on the loss of autonomy in their study, and it can be argued to be the most important factor for highly educated employees (Deci & Ryan, 1985; Ross & Reskin, 1992). However, there are many other factors important to employees concerning motivation. Deci and Ryan (1985) have named autonomy, flow and relations as the important factors to employee motivation. That is why this study refrains from pinpointing autonomy and rather focus on the general attitude the employees have towards the STEP process.

A broader view has the benefit of allowing a more natural conversation with the interviewees. The pilot interview showed that interviewees are not familiar with the term autonomy, and that it constrains the conversation.

In their study Deci and Ryan (1985) found that motivation has significant effect on the performance when solving a task. Motivation was especially important when solving complicated and complex tasks as those of modern work tasks.

With this in mind the motivation of the employees are important to consider when initiating a standardisation process. Especially when we know that theoretically, standardisation will contribute to a reduction in the autonomy of the employees (I. Stensaker et al., 2009).

Cognitive evaluation theory are one of the most recognised theories on motivation. Motivation theory separate between intrinsic and extrinsic motivation. Deci and Ryan (1985) argue that intrinsically motivated people perform the best. There are both criticism and support for the cognitive evaluation theory, but with the assumption that employees do not solely work to pay their bills it, at least, functions as a guide to predict the effect of the STEP programme. This paper does not further discuss the difference between intrinsic and extrinsic motivation, and here forth treat motivation as one subject.

Cognitive evaluation theory (Deci & Ryan, 1985), names three factors important to employee motivation.

### *Autonomy*

Autonomy is the ability to control and decide how to perform ones tasks. The theory predicts that humans seek complete autonomy and no limitations in their job, but that every possibility to decide their own tasks and how to perform them will have a positive effect on their motivation.

### *Flow*

Flow is the combination of competence to perform the tasks and that the task is still deemed challenging. If the skills of the employee is balanced with the challenges at hand the employee will be in a state of flow where they will perform optimally.

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### *Relations*

Relations is about getting attention for the job you do. Both by supervisors and by colleagues.  
Positive remarks on performance will increase motivation.

### 3. Methodology

This chapter describes the methods used to answer the research question of the paper. The primary data gathering of this paper has been done through a series of interviews with employees at Equinor who work in project organisations, and who have extensive experience working in projects.

The chapter discuss the choice of methods for the paper, the data collection, the validity and reliability of the data collected, how the data has been analysed and weaknesses which chosen methodology are subject to.

#### 3.1 Study Methodology

The methodology decides the approach to the collection of data. The methodology chosen should best suit the purpose to obtain the information needed to answer the research question. There are two main approaches to the collection of primary data to answer the research question.

The quantitative methods use data obtained by statistical methods or other quantifiable procedures. In other terms, quantitative analysis can be understood as measuring or evaluating things by the use of mathematical values of variables (Creswell, 2014).

The qualitative approach does not apply quantitative models but base its findings on intuition, rational and exploratory abilities (Ghauri & Grønhaug, 2010). Qualitative methods seek to answer questions about the ‘what’, ‘how’ or ‘why’ of a subject. While the quantitative method rather focus on the quantifiable data of a subject, such as ‘how many’ or ‘how much’. Qualitative research often aim to understand aspects like social life, where numbers often are less suited, and less informative than words (Creswell, 2014).

The characteristics of the qualitative research makes it object to some universal criticism. The data processing and analysis of qualitative studies are far more time consuming than the analysis of a quantitative data. Something that makes a smaller sample in such studies natural. With smaller samples than the quantitative analysis, the qualitative methods will struggle to present conclusions representative to a broader population, which makes it hard to generalise the results. The same can be said for the rigor of the findings by qualitative analysis (Creswell, 2014).

Finally, it is hard to tell if the findings are biased by the researcher's own opinions. A discussion, and the following data processing of such a discussion, is to a greater extent subject to researcher bias than what a numeric dataset is. However, this does not imply that you cannot make rigorous, unbiased and/or generalizable conclusions with qualitative analysis (Creswell, 2014).

### **3.1.1 Choise of Methodology**

Quantitative methods can be argued to have a better ability to deliver more scientifically sound results. With a larger sample and mathematically proven results, such research can deliver more valuable and rigid conclusions. The context, the available information and the research question of a paper can however result in the qualitative method delivering knowledge that is more valuable.

*“Not everything that can be counted counts, and not everything that counts can be counted”*  
(Cameron, 1963, p. 13).

The purpose of this master thesis is to analyse the organisational effects of the Equinor STEP programme, and especially, how the standardisation programme have affected the project execution at Equinor.

The most important factors to consider when choosing study method is the data available and how to best answer the research question. While a collection of quantitative data is possible, it would require extensive resources in pre-research, formulating, data collection and analysing of the data. Such a project would require a time horizon much longer than a master thesis has available, and it would conflict with the ambition to deliver guidelines to the STEP programme while still valuable. The subjects this study focus on are also hard to quantify without losing valuable information.

Exploring personal experience, and allowing the respondents to contribute with deeper knowledge or insight that is not covered by a questions formula and is hard to obtain in a quantitative research. The fact that there is limited research available on the subject also speaks against a quantitative design. Thus, a qualitative, exploratory approach, with the focus on the organisational effects accrued by the STEP programme is suited for this study.

## 3.2 Data Gathering

Data is the unprocessed pieces of facts, a series of numbers, observations etc. (Creswell, 2014). Every study is based on data, and the function of the study is to collect data and process it into useful information. As data is the foundation of a study, its quality will determine the quality of the entire study.

### 3.2.1 Primary and Secondary Data

Secondary data is the re-use of data collected by others. Books, reports, journals, statistics sets and databases are examples of secondary data (Creswell, 2014). These data have in common that the current research paper does not collect them. Secondary data might have been collected in a different setting, at a different point in time and for a different purpose than that of this paper. The quality and use of secondary data is therefore crucial to the quality of the paper who use it (Creswell, 2014).

In addition to secondary data this study has collected primary data. The study collect primary data both because it strengthens the study and because there are no data available on the specific subject. This paper use exploratory interviews as primary data source. Collecting data unfortunately has its disadvantages.

Collecting data is time-consuming (Creswell, 2014). Apart from the time it takes to perform the actual interviews, or other form of data collecting, there are many factors contributing to its time consumption. Any data collection needs preparations. Decisions have to be made on how to best collect the data, and how to obtain the highest quality of the data collected (Creswell, 2014).

Interviews as a data source, first and foremost requires willing and valuable interviewees (Brayer, 1978). In addition, in this study, cooperation with the company in which they are working is needed. It might take a lot of time to get participants for an interview, especially in projects like the ones in Equinor. Interviewees were stationed both across the country and abroad, even in different time zones. The geographical spread of the interviewees makes the study object to an already looming challenge, the fact that it is hard to predict both responses and unseen events.



In order to obtain high quality data the study had to consider many variables. In order to obtain high validity, the interviewees needs to be recruited across the organisation. Both with different experience, different positions in the hierarchy and in different departments. In addition it would contribute to the quality of the study if a good spread of the population studied could be achieved. That means picking interviewees with different demography, age and gender. Managing to find interviewees willing to share their experiences is also crucial (Brayer, 1978).

### **3.2.2 Interview Types**

There are three main categories of interview approaches (Punch, 2014). Each with its own set of advantages and disadvantages. Interviews can be used in both a quantitative and a qualitative study.

#### *Structured Interview:*

Structured interviews are based on the concept of every interview being conducted in a completely similar way (Brayer, 1978). This is achieved by an identical set of questions and structure. The structured interviews allows for data that is easier to handle. The data of a structured interview can in many cases be categorised and coded, making the data applicable for a quantitative analysis (Brayer, 1978).

#### *Semi-Structured Interview:*

Semi-structured interviews use an interview guide with topics that are to be discussed (Brayer, 1978). There is no demand for the questions to be discussed in the order of the guide and the questions and topics can be adapted to the interviewee. The loose structure of semi-structured interviews allows for a more natural discussion and a more natural flow, which can highlight elements not considered in the interview guide. However, the lack of structure makes it harder to process, and findings less rigorous (Brayer, 1978).

#### *Unstructured Interview:*

Unstructured interviews aim to imitate a normal dialog as close as possible (Brayer, 1978). The idea is that this will give the best in-depth information about the subject discussed. The interviewer does not prepare a set of questions, this will allow the interviewee to speak freely. The advantage of an unstructured interview is that you get all the information the interviewee

wants to share, without restraints by the questions. However, such interviews can be hard and vigorous to analyse (Brayer, 1978).

### **3.2.3 Chosen Interview Type**

This study's key aim is to find the organisational effects of the STEP programme. As there is little to no research on the subject, this paper use an explorative design. This indicates an unstructured interview design. Based on the findings in the pilot interview and the need to perform a thorough analysis at a limited time, there is however a need for some structure at the interviews.

With a semi-structured interview you can assure that all the chosen topics are covered in every interview. As the semi-structured interview does not completely narrow down the responses from the interviewee but provides a structure for the interviews, semi-structured interviews appears as the most natural choice for this paper. Hopefully it will allow for all the subjects to be discussed without limiting the answers from the interviewees significantly.

### **3.2.4 The Interview Guide**

Though the interviews are conducted as semi-structured interviews, where the conversation rather than the guide is emphasised, the interview guide is important in guiding the interview in the right direction. That is why the guide was prepared thoroughly.

Knowledge of the industry and the STEP process was used to make a draft guide. The Draft guide was applied in a pilot interview, in order to pinpoint the most interesting topics. After the pilot interview the guide was evaluated, and a final version was made and used in the rest of the interviews. The interview guide is found in appendix 1 of the paper. The guide was handed out a few days in front of the interviews to allow the candidates to reflect on the subjects.

### **3.2.5 Anonymisation**

The study has been reported to the Data Protection Authority to ensure that personal data is treated in a discretionary way. The study does not name any of the interviewees and does not give information detailed enough to identify them. Upon completion of the paper all information that link the interviewees are deleted.

## 3.3 Power of Results

The quality of qualitative research is measured by the validity and the reliability of the research (Creswell, 2014). Validity is the measurement of the extent to which the data collection method accurately measures what it was supposed to measure. In addition, the validity indicates if the findings explain what they are intended to explain. Reliability is a measure of if the data collection method would deliver consistent results if similar research were executed again (Creswell, 2014).

### 3.3.1 Validity

Exploratory studies are subject to two types of validity; construct validity and external validity.

Construct validity reflects upon the ability of the empirical data to measure what it aims to measure (Creswell, 2014). This requirement has been met by applying a range of information sources. This paper has applied extensive background knowledge about the subject by the researcher, internal Equinor information about the STEP process, relevant theory and, primarily, interviews with relevant personnel in Equinor as a source of primary data.

External validity relates to whether results are generalizable. This study would typically be measured towards its ability to be generalizable within the industry (Yin, 2003). Furthermore this study's external validity relies on if the study is comparable to general studies on industrialisation and standardisation. As this study is aimed at Equinor only, it can be problematic to generalize to general standardisation processes. However, within the industry, at least on a national level, it is plausible that companies are organised in a similar way to Equinor, and therefore the study can have validity towards the industry.

### 3.3.2 Reliability

Qualitative studies, and especially exploratory studies, struggle to reach the same reliability as quantitative studies. It's a lack of standardised structure of data gathering alongside difficulties in recreating the context of the study, both in terms of experience and knowledge of the researcher, and the situation surrounding the participants. If these factors are not in place it can lead to a different interpretation of the data (Johannessen, Christoffersen, & Tufte, 2016).

This study will be victim of the possible weaknesses mentioned above. As the interviews were conducted as semi-structured interviews, they are shaped by the conversation between the researcher and the interviewee. It is highly unlikely that another interviewee and/or another researcher would end up having an identical discussion. Similar settings would also be difficult to find, as there are major changes in motion in the industry, due to the drop in the oil price, climate challenges, rapid technology development and an industry that in general is volatile (Pindyck, 2004). The attached interview guide, the explaining of the goal of the study and the choice of sample, has strengthened the reliability of the paper (Creswell, 2014).

### **3.3.3 Sample**

In an ideal situation, a study would include the entire population on which it draws its conclusions. That would inflict a tremendous amount of work and in some cases an amount of data almost impossible to process. That is why a sample is used. A selection of the total population is studied to draw conclusions on the entire population. Usually the larger the sample the greater the quality of the results (Ghuri & Grønhaug, 2010).

This paper is a continuation of the work by Blindheim and Rydland (2015). As their paper was a literature study, this paper aims to provide empirical basis for some of their research. The exploratory design was chosen as there is no previous empirical studies on the subject. The qualitative analysis can provide basis for a future quantitative analysis, which could both give more rigorous results and stronger external validity, helping the research to extract more universal knowledge.

The sample in this study is limited to Equinor employees. As both the paper this study is based on and the knowledge of the researcher is limited to Equinor, a wider industry approach seems pointless at this time.

Most of Equinor's oil and gas production runs in continuous processes where it is hard to predict the future outcome of the small changes of today. First, it takes years and heavy investments to mature the discovery of an oilfield to production (Hannesson, 1998). Oil reservoirs are depleted in a continuous process production where key objective is to maintain zero down time until next turnaround. The speed of reservoir depletion is determined by the characteristics of the reservoir such as pressure, permeability, size and the optimal economical number of wells (Hannesson, 1998). Some oilfields are in production for over half a decade. The extensive time horizons and the continuous production profiles makes these organisations

ill-suited for measuring the effect of changes, at least at a short term or shortly after implementation (Karlsen, 2017).

The projects on the other hand, are in its nature of shorter horizons with clear goals and deadlines. This is why it might be easier to discover the effects of the STEP process in project organisations, rather than in a continuously operating department. To harvest the increased visibility of effects in project organisations, the study limits its population to employees in project organisations. The hope is that the findings in the project organisations can reciprocate in the rest of the company.

Furthermore, the sample has been limited to candidates with project experience both pre and post STEP execution. Interview objects have been collected across the project organisations; management, acquisition, engineering and documentation. The interviewees have been working at the Johan Castberg project, the Gina Krogh project, the Gudrun project and the Johan Sverdrup project. This assures a wide sample of projects with different challenges, sizes and project phases.

### 3.4 Analysis Method

Qualitative studies generates a large and complex set of data, and semi-structured interviews generates data that is heavy to process, which adds to the complexity. One of the key challenges when conducting qualitative studies is the structuring of the information to make it applicable for further analysis (Punch, 2014). Analysis of qualitative data requires organising and decomposing the data into useful information like figures, tables and discussions (Creswell, 2007). As qualitative data is more complex than quantitative data there is a range of ways to analyse it, as a result there are no definite way of analysing qualitative data (Johannessen et al., 2016).

Though there are no right and wrong, there are acknowledged approaches to analysing qualitative data, one of them is the stages of qualitative analysis(Huberman, Miles, & Saldana, 2013). According to Huberman et al. (2013), the process of analysing qualitative data can be divided into data reduction, data display and drawing and verifying conclusions.

### **3.4.1 Stages of Qualitative Analysis**

#### *Data Reduction*

Refers to the process where the qualitative data obtained like the interview transcripts, video/audio material, notes or observations is reduced and organised. It can be reduced and organised for example by coding, summaries or discarding of irrelevant data (Huberman et al., 2013). This study obtained video/audio material, which was transcribed to further process the data.

#### *Data Display*

Data display is to draw conclusions from the data. An informative display of data is key, in the form of tables, charts and other graphical formats is valuable (Huberman et al., 2013). The data transcribed in this study was to a little extent useful to make tables, charts or graphical format. A table on page 33 in the study contributes with some data display.

#### *Drawing and Verifying Conclusions*

The aim of the analysis is to enable the study to develop conclusions and findings. The analysis should contain initial conclusions that can be drawn on later in the study. The initial conclusions can be verified and the validity can be examined through cross-referencing notes and other data with initial conclusions (Huberman et al., 2013). The initial conclusion in this study was at large provided by the literature study by Blindheim and Ryland.

## **3.5 Weaknesses**

The study did not collect data from more than six interviewees, plus the pilot interviewee for this study. The need for candidates who had experience in projects both before and after the STEP programme, from different parts of the project organisations and limited to the Sverdrup, Gina Krogh and Gudrun project proved to make the number of candidates small. However, a significantly higher sample would have been too time consuming to process and analyse, and the interviewees provided the study with plenty of useful information. The small sample should contain this study from making to prompt conclusions.

Any research is object to researcher bias. The fact that the researcher in this study has more than twelve years of work experience in Equinor makes this paper especially vulnerable to biases. Though the researcher can use the experience and knowledge on the STEP programme,

standardisation in Equinor and knowledge of Equinor in general to help me collect data, that experience should not affect the analysis of the data.

Moreover, the researcher employment in Equinor has the potential of affecting the answers by the interviewees. They might be inclined to hold back on negative reflections and compromising information. In order to hinder such biases the interviewees were explicitly informed of the complete separation between Equinor and the paper, and thorough information was given on the strict anonymization process.

Finally the sample of interviewees was not evenly distributed on gender, age and ethnicity. All interviewees were male, with Norwegian nationality and age ranging from 39 to 63. The sample is skewed because of the lack of candidates with the named qualifications.

## 4. Findings and Analysis

The following chapter link the theories and the empirical material to harvest the knowledge that can be drawn from this study. The research question “*what organisational effects occurs in Equinor project organisations as a consequence of the STEP programme*”, is answered in this section of the paper.

First the analysis link the data to the four axis and the theory to make a comprehensible overview of the organisational effects of the STEP programme. This will enable the study to confirm or highlight the theories, or in some cases, the findings may contradict renowned theory on the subjects.

Finally the findings underneath each axis are combined to answer the research question. The answer is compared to the theories to either confirm or find deviations from what Blindheim and Ryland has compiled in their literature study.

### 4.1 Efficiency

There is no doubt that the project organisations interviewed in this study have increased their efficiency. The STEP programme have for example helped cut cost for the Johan Castberg project with an initial budget break even at an oil price of 80 \$/bbl. to an oil price of 36 \$/bbl. to break even, according to one interviewee. This despite a mostly unchanged choice of concept, according to the interviewees. It can hardly be argued that such a dramatic cost reduction, without a significantly different choice of concept, can accrue without a major increase in efficiency. You can simply not build the same rig at a lower cost without building it in a smarter way. Hence, increased efficiency. The interviewees tell of how they have cut parts of what they agree is unneeded documentation and that they have reused parts of earlier documentation found in the company, instead of making everything from scratch. The reuse of earlier documentation is a part of the TR packaging of the STEP programme. The packaging is done to significantly reduce redundant work in the different project organisations. The experiences by the interviewees confirm that the bureaucratic processes of Equinor (I. Stensaker et al., 2009) has been improved.

The interviewees in the Gina Krogh and the Johan Castberg projects tell of an increased focus on the FEED. Several interviewees argue that a thorough feed is key to cost efficient projects.



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Most of the interviewees point out that late changes are extremely costly, they often have to go outside settled contracts, and often push time limits. Interviewees state that the more thorough the feed is, the less changes in late phases of the project will accrue, less work outside contracts, less extra labour in late phases, less delays, and in the end, less budget cracks.

While earlier projects have been characterised by a small initial organisation who grows throughout the project phases, interviewees lobby for turning that characteristic upside down. Starting off with a large organisation with focus on delivering the highest possible quality on the FEED stages and through the DG2, would reduce the need for modification in late stages and the thorough work would enable an effective project execution.

The study has found that all the projects have benefited greatly from the STEP programme. As mentioned the Johan Castberg project has cut its break even price by more than half. The Gudrun project was helped to reach production ahead of schedule and below budgeted cost. The STEP team helped the Gina Krogh project to identify measures that made them reduce cost. And the Johan Sverdrup organisation was able to spark several change initiatives in their FEED phase, which helped them avoid costly changes in late project phases.

However, when asked about ideas on initiatives to further increase efficiency, all interviewees have ideas. Unanimously, they state that TRs are in need of further improvement. Many of them state that the extensive TRs in fact has not been reduced in any significant way. Some requirements have been clarified, and the grouping of TRs into packages suited to specific jobs is perceived as an improvement. However, many of the interviewees was hoping that STEP would make some of TRs less extensive, but state that it has not. Interviewees point out that the TRs still generate tremendous amounts of work, especially in the HSE departments. The statements contradict the findings on reduced redundant work and bureaucratic work processes. Or at least it confirms that there is still a lot of work to be done, at least by the opinion of the interviewees. On the other hand they all agree that there is an increased focus on economy and cost in the project, which implies that some sort of ratification and increased control have been executed.

Two of the interviewees argue that the requirements in the TRs are in place in order to meet Ptil and national requirements of NOROG, ISO standards, etc., as well as making standards across the company, but that the NOROG requirements are less complicated to interpret. They propose that it might be wise to mimic the structure of NOROG requirements.

The interviewees in the Gina Krogh organisation stressed the importance of experience and the relations they were able to benefit from as most of the organisation were recruited directly from the Gudrun project to the Gina Krogh project. This proves the importance of experience and relations in an organisation and how it could benefit the effectivity of the project.

Many of the interviewees believe that one of the most important contributions to the increased effectivity comes from the contractors and the communication with the contractors. Unlike previous practices, contractors are now invited to contribute to improvement initiatives, and they are challenged to identify cost-reducing ideas. This has made contractors a more integral part of the project, and not only a third-party with outsourced assignments. Contractors have earlier been scared off from implementing cost reducing measures. The contractors were often constrained by contracts with strict fines for incompliance with TRs. That made contractors interpret the TRs in a very conservative way. Among others, it has led to designing personnel lifts up to topside cranes, when staircases are plenty good, and living quarter quality HWAC units in rarely visited shafts and bulkheads.

When asked if the interviewees themselves work in a more efficient way than earlier, they are hesitant, and many of them state that they pretty much work in the same manner as they always have done. Those who do not state that they work in the same manner as before struggle to find concrete examples of just what they are doing more efficiently now, than before.

The greatest contribution to increased efficiency is by most of the interviewees claimed to be the changed focus in the organisations. The organisation is forced to evaluate the economics of every decision they make, and change their mind-set from solely focusing on the most robust and technically fitting solution to also considering the cost of the solution they choose.

When the industry was booming there was a great sense of urgency in the project organisation, many of the interviewees state, and hindering delays was key focus. If an issue accrued the focus was to fix that issue as fast as possible, cost was irrelevant.

#### **4.1.1 Efficiency Summarised**

The interviewees perceive an increased efficiency in their projects. They especially emphasise the increased economic focus in the organisations, the improved cooperation with contractors and the importance of experience and relations. Nevertheless, the interviewees struggle to name how they themselves are more efficient than before. The interviewees are quick to

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suggest further efficiency improvements, which could indicate potential for even higher efficiency than the STEP programme has been able to harvest, which has implications for employee involvement.

## 4.2 Changed Workday

Theory states that the effect of a change processes is best measured by the effect on daily routines. This implies that if there are no change in the way the organisation works, there has not been any significant change in the organisation (Kotter, 1996).

When asked if the interviewees experience changes in their workday, they state that their everyday routines have not changed. However many of the interviewees at some point during the interview state that there has been a change of focus in the projects. Many of the interviewees have been involved in identifying e.g. design changes that cut cost, improvement initiatives at an early stage to cut cost and workshops with contractors to identify cost carriers. Some of the interviewees also state that while before STEP the focus was on reducing project time and delivering on estimated time, the focus after STEP is on identifying cost effective solutions and delivering on budget.

The STEP programme have not resulted in changes in the CVP system, and thereby the project organisation work in a very similar way as before the STEP programme. This might explain why the interviewees do not feel like their workday has changed when bluntly asked about it. However, the majority of the interviewees has experienced a change of focus in their projects, and many of them have been involved in cost identifying and cost reducing measures. Some of the interviewees have even participated in the external review done in cooperation with STEP specialist to identify savings potential. Even though the projects still have the same system, the focus of the project has changed.

Key objective is no longer delivering on time, but delivering on, or below, budget. This may not change their responsibility and routines, but it changes their thought processes when completing their tasks. The lack of perceived change is never the less problematic, if the employees of Equinor do not feel like there has been significant change, it will affect their perception of the STEP programme. No perceived change can lead to employees thinking that the programme has had no effect, which can cause the employees to think of STEP as a failure, regardless of actual results. This can imply that the employees will be less particular on

following the measures executed by the STEP programme, and it could lead to negative subcultures developing.

### 4.2.1 Changed Workday Summarised

Even though the interviewees state that their workday has not been changed, it is evident from the interviews as a whole that their thought processes, and thereby the result of their assessments, has been changed. The STEP programme seems to have had little to no impact on the workday of the interviewees, but it seems to have been successful in changing their mind set. Hence, though the task is pretty much the same, the change in attitude towards the task can lead to significant change in the result. Nevertheless, the perceived lack of change is worrisome.

## 4.3 Involvement

Some of the interviewees have been actively involved in the STEP programme, both in central STEP programme groups and external STEP reviews revising the projects. This reflects upon the perceived involvement by the interviewees. Those actively involved have naturally perceived a higher involvement than the interviewees that have not. The interviewees who have not been involved in many cases perceives the STEP programme as a pure top down initiative without any employee involvement.

<i>Interviewee number</i>	<i>Involved externally</i>	<i>Involved in revision</i>	<i>Perceived involvement</i>
Pilot		x	Medium / low
1	x	x	High
2	x		Medium /high
3		x	Medium
4		x	Low/ Medium
5			Low
6		x	Low/ Medium

For any change initiative, the success of the initiative is dependent on employee involvement (Kotter, 1996). Employee involvement allows the employees to make a personal commitment to the cause. While the opposite often makes employees distance themselves from the change. This is especially the case in Norwegian work culture and Equinor, where there are traditions for close cooperation between employees, unions and management (Blindheim & Ryland, 2015, pp. 45–46).

As mentioned in part 4.1.1., the interviewees all propose further contributions to the STEP programme. While the STEP programme cannot implement every change proposed by its employees, the fact that every interviewee has, seemingly good, ideas on further improvements implicates a lack of actual involvement by the employees. Though some of the employees have been involved in work with the STEP programme, none of them have been involved in forming the actual scope of the programme. Though there has been employee involvement in the executing part of the work, this indicates that the involvement when the programme was made has not been sufficient. The consequence is seemingly that the STEP programme has not reached its full potential.

### **4.3.1 Involvement Summarised**

There is a great spread in perceived involvement by the interviewees. The spread seems to be correlated with how involved the interviewees were with the STEP programme work. Though many of the interviewees feel like they were involved to some extent, they all had ideas on further improvements. When looking at what tasks the employees were involved in it is evident that they have been involved in the executing part, and not in settling the scope of the programme. By doing so Equinor has managed to make the majority of the interviewees feel like they have been involved. The benefit of what seems to be involvement only at the executing stage, can be that the programme can reach execution phase much quicker. However it looks like they have sacrificed some valuable input that could have improved the programme by doing so.

## 4.4 Quality Delivered

Equinor has become more efficient with the implementation of the measures in the STEP programme. The heightened focus on costs in decision-making processes has also contributed greatly to cost reductions. However, a changed focus, and improved efficiency seems unlikely to be the only contribution to such extensive cost reductions as those accrued by the STEP programme.

Quality was discussed with the interviewees and they categorically denied solutions compromising company HSE standards. The categorical denouncement of safety compromising quality downgrading, might be reflected upon Equinor's strict HSE commitment (Hansen et al., 2012). Compromising security is something unheard of across the company, even when analysing cost versus HSE, at least as a subject discussed, or as a spoken strategy. The further discussion on the subject quality seemed to be coloured by the interviewees need to denounce any safety compromising quality compromises.

When asked about equipment maintenance, several interviewees pointed out that there are estimated lifetime cost on the equipment, and that this should prevent equipment of insufficient quality. What the interviewees are saying is that when technical solutions are chosen they do not only consider purchase price, they also calculate lifetime cost. The belief is that the calculated lifetime cost should prevent solutions of too poor quality being chosen. When asked about redundancy some of the interviewees were more admitting to concerns about that. Technical redundancy is spare capacity in order to be able to cope with unforeseen events. E.g. Duplicated security systems, more than 100 % firewater pump capacity and standby pumps if one brakes down. However, the interviewees emphasise that the TRs have remained the same and that the TRs secure redundancy.

Robustness was also discussed, and most of the interviewees perceived that the projects had robustness to cope with future challenges. One interviewee stated, "Though I feel the robustness is adjacent, we cannot design rigs that consider the possibility of future discoveries or unknown challenges". Most of the rigs offshore that has been in service for a while have been subject to major modifications. The modification projects on those rigs have at times been dependent on the robustness of the rig to facilitate cost efficient production of new discoveries or facilitate new technology for IOR. Hence, robustness can prove vital for field lifetime, IOR and producing new (and marginal) discoveries.

Finally, quality delivered was discussed with the interviewees in terms of innovative solutions and new technology and how that could be challenged by standardised solutions and cut in cost. One of the interviewees explained that though you have a more standardised approach to projects, larger projects are so complex and unique that even though you have a standardised framework the solutions are at large one-off. Hence, no effect on innovation. Other interviewees claimed that the increased focus on cost were positive for innovation and new technology, as this forced the organisation to find smarter solutions. On the other hand, some of the interviewees said that standard solutions could challenge innovations. New and larger contracts also bound the organisation to use specific suppliers, something that reduced the use of new and small suppliers who might have some innovative solutions.

#### **4.4.1 Quality Delivered Summarised**

The subject was discussed with robustness, quality and innovation in mind. Every interviewee categorical denies any HSE compromising quality solutions. They also state that the TRs have not been changed whit regards to quality demands.

Though the interviewees mentions some restrictions caused by the STEP programme, they generally do not perceive any quality degradation as a consequence of the STEP programme.

## 5. Conclusion

This study aims to explore the organisational effects of the STEP programme in Equinor project organisations. If the findings are generalizable, the findings can predict effects of the programme across the company or even the effect of similar programmes in other companies.

### 5.1 Findings

Generally speaking, it seems like the STEP programme has accomplished most of its major goals without causing severe organisational effects. The study does not by any mean dismiss the major personal effect it has had on the people laid off due to the programme, although that is not the focus of this paper. The programme has had no problem with establishing the urgency needed in the organisation to make the employees support the change initiative (Kotter, 1996). Though it needs to be pointed out that the dramatic fall in oil prices have probably helped making this an easy task. The company was suddenly struggling with its profitability, something easily visible to every employee.

Focus on HSE seems very much safeguarded in the process. Equinor has a company culture of strict HSE focus. Every interviewee categorically denies HSE compromises, proving the commitment to HSE.

The STEP programme have successfully made our sample of employees adapt a new and heightened focus on cost. The interviewees highlight concrete examples where this changed focus has accrued considerable savings. At the same time, the interviewees have no problem identifying additional savings potential. Especially cuts in TR demands seems advisable to consider.

Some indications of reduced redundancy and robustness in the solutions chosen have accrued, and the level of involvement among the employees varies a lot. Naturally, the employees directly involved in STEP initiatives perceive more involvement than those who have not been involved. It is possible that those not involved in any STEP initiative have ideas that could prove valuable.



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## 5.2 Research Question Answered

*“What organisational effects occurs in Equinor project organisations as a consequence of the STEP programme”*

The study identified four subjects of interest where it explores the organisational effects of the STEP programme. The effects of the four subjects combines to answer the research question.

### *Efficiency*

The efficiency gains seem to come from improved cooperation with contractors, better project control, experience and relations and the general focus in the organisations. The interviewees do not perceive that they have become more effective in their work, which is a negative trait. However, it can be explained by the fact that they do things in a similar way as before. The focus of the employees solving their tasks has however changed.

### *Changed Workday*

The employees do not perceive any change in their workday, something that according to the literature is problematic. However, this might be caused by how the interviewees interpret “changed workday”. The interviewees all acknowledged a change of focus in the organisations. Which obviously is enough to accomplish major efficiency gains.

### *Involvement*

By involving many of the employees in the executing part of the programme, Equinor has been able to avoid any major resistance against the programme. However, the fact that all of the interviewees propose improvements to the STEP programme indicates that Equinor has not been able to completely harvest the positive effects one could have had from involving the employees.

### *Quality Delivered*

The interviewees perceive unchanged quality delivered by their organisations. There are however indications that the robustness of the solutions chosen have been affected by the programme.

### 5.2.2 Research Question Answer

The organisational effects of the STEP programme is:

- Increased focus on cost.
- Some indications of reduced autonomy.
- Too little involvement in planning stages.
- A general opinion that the STEP programme could have had a greater impact.

### 5.3 Reliability and Validity

The study have been conducted on a small selection, and the selection is limited to project organisations. Conducting semi-structured interviews with similar conditions to the ones conducted would be impossible. This, alongside the general weaknesses of the qualitative method makes the study badly suited to predict similar programmes in other companies. Even at different times in the same company, or in the same industry, it would not be recommended to use this study to predict outcome. Both the effect of the special conditions in the industry, and the special conditions in the company, makes such predictions risky. However, the study can be useful in evaluating the current STEP process and implement programme adjustments to secure an optimal result from the STEP programme. The study is also suited to complement the paper by Blindheim and Ryland (2015), and form a base for further quantitative analysis on the subject.

### 5.4 Recommendations

Based on the findings in this study and the theory summary by Blindheim and Ryland (2015) a set of not too prompt recommendations have been formulated. The recommendations are sub categorised into recommendations concerning the continuing execution of the STEP programme and the recommendation for further research.

### **5.4.1 Equinor**

Equinor has willingly supplied interviewees to the study, and in return the study suggest improvements that could help the company in its continued efforts to increase profitability without causing negative organisational effects.

Unanimously the interviewees mention the need for further revising the TRs. Equinor should consider further cuts and simplifications of both the TRs and the TR system. All employees interviewed also present ideas for further cost reductions in the company.

Equinor should be aware that it seems evident that there are abundant amounts of ideas for further cost reductions among its employees. An alternative is to make a forum for employee input. The forum will need to be promoted to make it known to every employee, and to make sure every employee is involved.

Revise robustness and redundancy in solutions chosen. While all employees state that HSE is not being compromised, many of the interviewees state that compromises has to be made with regard to robustness and redundancy. Though it might cut cost in the short term, it might prove unwise in the long term. Equinor has benefited greatly from the robustness of the fields developed when new resources, changed parameters or new technology has accrued. This is worth considering when choice of concepts are made.

### **5.4.2 Further research**

The exploratory design of this qualitative study makes it unsuited for prompt conclusions. As mentioned by Blindheim and Ryland (2015) their study can be used as a base for qualitative analysis on the subject of standardisation and industrialisation. A quantitative analysis could add to the work in this paper, and possibly make more robust and universal conclusions, to bring deeper understanding to the subject of standardisation and industrialisation as a field of study. As mentioned by Blindheim and Ryland (2015), and supported by this paper, the subject of standardisation and industrialisation of work processes is an unexplored field of knowledge in need of further research.

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## 6.1 Appendix 1: Interview Guide

# Interview Guide

## 1. Introduction

- Ask for permission to record the interview.
- Inform about, and hand out, the information sheet. Focus on interviewee confidentiality and anonymity.
- Inform about how and why we conduct a semi-structured interview.
- Inform about the topic that is to be discussed
- Questions from the interviewee

## 2. Interviewee Background

- Age, experience and current position.

## 3. Topics

- Have your project been challenged by external revision?

### 3.1. Are the Efficiency of the Projects Affected by the STEP Programme

- Have the work scope of the projects been changed
- Have the requirements in the TRs been changed
- Are the requirements in the TRs suitable to the project
- Would you propose any changes to increase efficiency

### 3.2. Has your Workday been Affected by the STEP programme

- Do you face the challenges in a project differently now than before the STEP process
- Have your routines changed
- Have your responsibilities changed
- Have the demands you face changed

### 3.3. Have the Projects been Involved in the Implemented Changes

- Have you contributed to the changes
- Have your ability to perform in your job been changed
- Have all the changes benefited the project

### 3.4. Have the Quality of the Projects Changed

- Have the robustness of the solutions changed
- Have the quality of the solutions changed
- Do the projects deliver the same ingenuity

## 4. Ending

- Thank the interviewee
- Remind about privacy and contact information.

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## 6.2 Appendix 2: Information Sheet (In Norwegian)

### **Forespørsel om deltakelse i forskningsprosjektet**

*”Hvordan påvirkes prosjektene i Equinor av standardiseringen som er innført i selskapet?”*

#### **Bakgrunn og formål**

Studien er en masteroppgave ved Norges Handelshøyskole. Studien ønsker å utforske hvilken virkning standardiseringen gjennomført i Equinor har hatt på prosjektutførelsen i selskapet.

Studien er gjennomført uavhengig av Equinor og eneste involverte institusjon er Norges Handelshøyskole.

Utvalget i undersøkelsen er Equinor ansatte med erfaring fra prosjekter.

#### **Hva innebærer deltakelse i studien?**

Deltakelse innebærer et intervju på mindre enn en time. Intervjuet vil ta for seg tema beskrevet i forrige avsnitt. Intervjuet vil dokumenteres ved hjelp av lyd/filmopptak.

#### **Hva skjer med informasjonen om deg?**

Alle personopplysninger vil bli behandlet konfidensielt. Kun student og veileder vil ha tilgang til innhentet data. Personopplysninger/opptak lagres for å ivareta konfidensialitet. Materialet blir lagret ved uavhengig kryptert disk.

Deltakerne vil ikke kunne gjenkjennes i publikasjonen.

Prosjektet skal etter planen avsluttes desember 2016. Datamaterialet skal anonymiseres ved prosjektslutt.

## **Frivillig deltakelse**

Det er frivillig å delta i studien, og du kan når som helst trekke ditt samtykke uten å oppgi noen grunn. Dersom du trekker deg, vil alle opplysninger om deg bli anonymisert.

Dersom du har spørsmål til studien, ta kontakt med Andreas Hundvin, 41668247. Eller ta kontakt med veileder Jørn K. Rognes, 55959495.

Studien er meldt til Personvernombudet for forskning, NSD - Norsk senter for forskningsdata AS.

## **Samtykke til deltakelse i studien**

Jeg har mottatt informasjon om studien, og er villig til å delta

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(Signert av prosjektdeltaker, dato)



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