Standardization

Implementation of Process Standardization in a Decentralized Organisation

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Abstract

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Title: Standardization - Implementation of Process Standardization in a Decentralized Organisation

Background and problem: Developing mutual operations increase efficiency and facilitate management control, which is important for unit comparison in decentralized organisations. Many organisations worldwide choose to standardize their processes because of these advantages. But standardization is not without problems since it brings negative effects that need to be considered.

Purpose: The purpose of this study is to compare the units within the company in order to identify differences and important factors when considering standardization. The study also intends to contribute to the knowledge concerning standardization by identifying essential factors for a successful implementation, based on how the company operates at present. This intends to result in recommendations for the company to use when standardizing their processes regarding POC.

Methodology: This study consists of a qualitative case study on a company, which is in the process of implementing standardization. Interviews were performed in three of the company’s Swedish offices.

Conclusion: The study shows that standardization will bring several benefits for the company and the recommendations are to proceed with the implementation process. The company must however take action in order to make the implementation possible. By introducing a mutual template for models, document best-in-class procedures and adopt them, set procedures for storing essential documents, and increase the knowledge and understanding for other units’ procedures and needs.

Key words: Standardization, Process Documentation, Implementation, Revenue Recognition, Percentage of Completion, Milestones, and Decentralization.
Preface

We want to thank everyone that has contributed to the upcoming of this essay.

We also want to thank our Anders Jerreling, who has supervised us through the entire process. We also want to thank the respondents for their cooperation and we are certain that they will find our research useful.

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Abbreviations

CC  Completed contract
FAR  Förening Auktoriserade Revisorer
IAS  International Accounting Standards
IASB International Accounting Standards Board
IFRS International Financial Reporting Standards
POC Percentage of Completion
QPR Quarterly Project Reviews
VLS Internal document for project managing in Office B
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1. Introduction

The introduction chapter will present the background of the study, discussion of problem and formulation of problem. Furthermore, the disposition of the remaining chapters will be presented.

1.1 Background

Ross et al. (2006, p. 27) describes standardization as “...defining exactly how a process will be executed regardless of whom is performing the process or where it is completed.” Developing mutual operations increases efficiency and facilitates management control which is important for unit comparison in decentralized organisations (Ungan, 2006a). Anthony and Govindarajan (2007, p. 230) claims that standardized processes for executing tasks becomes more important since decentralization becomes more common. Ungan (2006a) also explains that it is desirable to achieve standardized operations in decentralized organisation. Many organisations worldwide choose to standardize their processes because of the advantages and the ability to make comparisons between their business units. When it is easy to compare units, it facilitates the use of benchmarking. Benchmarking is a management tool that studies similar organisations, in order to find operations that are better functioning and can be imitated (Anthony & Govindarajan, 2007, p. 435). Standardization also entails benefits such as easier process control and a positive view of service and product quality (Ungan, 2006a).

Even though implementation of standardized methods for organisational operations generates business advantages, it is important to be aware that the creation of standardized solutions also raises problems. For example, Kondo (2000) claims that standardized processes may damage the abilities to be innovative within a company. Ungan (2006a) explains another problem with
the developing of a standardized model due to the, that if several models are in use it is often hard to pinpoint which is considered to be best-in-class. It is also difficult to document the exact execution of a task since “…individuals involved in a process develop their own way of doing things and are not able to easily communicate it” (Ungan, 2006a, p. 136). This also makes it hard to document the processes, which is one of the foundations in the standardization process (Ungan, 2006a).

Madsen (2011) mentions that some units, such as accounting units, are fairly standardized since they are obliged to operate from rules and recommendations that are the same for all businesses. However, the author does not believe that these units are as standardized as it seems. This is because of the rules and recommendations only guide the practitioner and there are plenty of room for individual interpretations. This makes it necessary to establish a plan for consistency in operations, even in these types of units.

An international company described their plans for the implementation of a standardization program regarding their financial units. They had encountered difficulties in how this implementation should be carried out in their decentralized organisation. The company, which requests to remain anonymous, is in the process of developing a mutual financial department. This single unit will handle the financial activities for all offices, and they are therefore in the need for standardized methods in their operations. By standardizing, the current unit specific operations will turn into mutual ones. Employees of the financial unit will be located in their current offices with the ability to manage work for other offices (Head of Project Control Office A, 2012-03-26).

The assignment is to identify similarities and differences in how the processes is carried out, and generate mutual recommendations for how revenue recognition should be used in the three Swedish offices. These units
operate within the industry of equipment and services for power generation. Most sales consist of long term projects and require a different type of accounting (Head of Project Control Office A, 2012-03-26). Dag Smith (2009 p. 139) mentions Percentage of Completion (POC) and Completed Contract (CC) as two alternative methods. POC enables companies to account for revenues and costs that are not yet realized by estimating the progress and expressing it in a percentage share. When applying CC, companies wait to book the revenues and cost until all work is completed.

The three Swedish offices work in separate areas within the industry and are therefore involved in different projects. Despite these differences, the units work in such similar manner that standardization is considered possible (Head of Project Control Office A, 2012-03-26). The usage of POC enables companies to get an overview of their projects, as well as make the financial and management accounting more adequate since the revenues of a project is divided into the corresponding fiscal year. By separating costs and revenues into different periods, accounting will be comparable between units and provide a more accurate depiction (Smith, 2009 pp. 30-31). The implementation is intended to be performed step by step and is currently in the start-up phase. One of the first steps is to standardize the process regarding POC (Head of Project Control Office A, 2012-03-26).

In order to decide the degree of completion of a project, the company has pre-determined milestones that represent key events during the lifetime of the project. When a milestone has been achieved, the corresponding revenue and cost can be put into the accounting. As of today, the company experience a disagreement regarding to how milestones should be determined, when they are to be considered achieved and how to use the percentage of completion method in general. By standardizing this method, the company aims to achieve a higher sense of understanding between offices. By standardizing when milestones are achieved, accounting will be more equal. Personnel
from the financial unit should be able to understand the involved processes, regardless of which office the project has originated from (Head of Project Control Office A, 2012-03-26).

1.2 Problem Discussion

The company examined is in the process of standardizing their operations. The standardization is meant to facilitate the re-organisation of the financial units. Today, units within the company apply different approaches when using POC. This causes problems in management control and as a result, the company finds it challenging to compare business performance and sharing personnel without additional training. In order to establish a mutual financial unit for the three offices, the company needs to standardize procedures involved. The intention of the program is to facilitate the collaboration between the three Swedish offices by making their procedures as equal as possible (Head of Project Control Office A, 2012-03-26).

The offices have different ways to determine the degree of completion for projects. This is considered to be a problem since the understanding between units is lost. A further problem is that the company does not know whether the different offices operate in the same manner regarding the process of POC which creates uncertainty. An example is the differences in how the offices decide whether a milestone is achieved or not (Head of Project Control in Office A, 2012-04-13).

An additional issue is that the company must consider the domestic and international laws as well as internal recommendations involved, since the method is used for both financial and management accounting. The existence of internal recommendations sets the standards for how the units should operate. The company must also consider that different offices might have different needs because of the differences in the unit’s projects (Head of Project Control Office A, 2012-03-26).
As mentioned, a solution to the problems is to implement standardized methods concerning their operations, in this case the operations regarding POC. By using a standardized method for POC, employees will gain knowledge about how procedures are executed, increase the ability to compare and co-operate. Since the process will be performed in the same way at the three offices, comparison between units within the company will be possible. The standardization will contribute to similar perception for milestone achievements, comparable accounting and decreased uncertainty regarding to how the other offices operate (Head of Control, Office A 2012-03-26).

Implementing standardization is not without problems. When implementing standardized procedures it may be problematic to choose between different solutions, since it can be hard to identify which one is the best (Ungan, 2006a). This also raises political issues within the company, because designers of the turned down solutions may feel infringed (Kondo, 2000). This study intends to solve these problems for the company by examining which factors to be considered of importance for the implementation process.

1.3 Problem Formulation

1. What factors differ between the three offices regarding the usage of Percentage of Completion?

2. What factors should be considered before implementing a standardized method for Percentage of Completion within the company?

3. What would be a functioning approach for implementing standardization within the company?
1.4 Purpose

The purpose of this study is to compare the units within the company in order to identify differences and important factors when considering standardization. The study also intends to contribute to the knowledge concerning standardization by identifying essential factors for a successful implementation, based on how the company operates at present. This intends to result in recommendations for the company to use when standardizing their processes regarding POC.

1.5 Disposition

The reader will be presented to the methodology that has been chosen considering how data for the theoretical and empirical section will be gathered. The section following is addressed to the gathering information concerning the subject and theories and approaches for standardization and process documentation that is advocated in the chosen literature will be presented. The following chapter presents the empirical data and observations that is a result of our gathered information by the methods presented in the methodology section. This is followed by an analysis of the theoretical and empirical parts and intends to show how the theoretical standpoints can be implemented, and how they fit based on the situation presented in the empirical section. The last chapter presents our conclusions for this essay and intends to summarize the results.
Figure 1. Disposition of the study

- The chapter illustrates the choices made regarding the method to be used for the study.
- The chapter contains theory from articles, literature and electronic sources concerning the subjects of standardization, decentralization, work in progress and process documentation.
- The chapter contains the empirical data gathered through interviews and completion of secondary data.
- The chapter contains the analysis based on the theoretical and empirical data.
- This chapter contains the conclusions and recommendations based on the analysis in the prior chapter.
2. Methodology

This chapter will present the choices of methodology for this essay. The reader will be presented to the approaches, designs and strategies that the study will be based on. This includes the approach, research strategy, research method, research design, quality measures, information gathering, and sample.

2.1 Approach

2.1.1 Deductive or inductive
There are two approaches that can be assumed when deciding the research’s position regarding to the correlation between theory and empirical data. The deductive approach advocates the common view, and an implementation of this approach results in hypotheses derived from established theories, which then are to be tested against empirical data. The second approach is to use an inductive approach, where the empirical data results in new theories based on the made observations. It is described as the approaches should be seen more as tendencies for the research rather than determined ways to base the research on (Bryman & Bell, 2011, pp. 19-25).

2.1.2 Chosen approach
The study started off by gather information concerning the company’s problems and current operations. The information concerned in the background and problem discussion was based on empirical information collected from the company, and theoretical information from articles concerning the subject of standardization. The result was generated by comparing the company’s current situation with how the theory advocates an implementation of standardization. The study could therefore be considered to take an inductive approach because the results was based on observations and also given that the problem arose from a practical issue originated within the company.
2.2 Research strategy

2.2.1 Ontological viewpoint
The chosen research strategy sets the standard for the definition of knowledge, the relation between theory and practice, and also how to interpret the context. The latter is designated as the ontological viewpoint by which the researcher interpret the context, either as something that is predetermined and cannot be affected, objectivism. Or as constructionism, that something is created by social interaction and is continually revised (Bryman & Bell, 2011, p. 33).

The study was based on the assumption that social events neither were dependent on interaction nor created by the surroundings. We argued the study to be conducted in an objective manner since the intention was to depict the processes involved. The standpoint should therefore be considered to be objectivistic.

2.2.2 Epistemological viewpoint
Bryman and Bell (2011, p. 27) describes two approaches to the subject regarding the definition of knowledge, the epistemological standpoints positivism and hermeneutics. The positivistic standpoint explains knowledge as something that can only be perceived by the senses and scientific. Hermeneutics requires the researcher to capture the subjective meaning in social actions and interpret the underlying factors.

The intention was to objectively depict the processes in a specific case. We therefore argued the positivistic standpoint to be the best choice since the standpoint represents a scientific approach.

2.2.3 Qualitative or quantitative
Bryman and Bell (2011, p. 40) mentions two types of research strategies, the qualitative and the quantitative. The structures for method will vary, depending on which the researcher chooses. The qualitative strategy
advocates a research that is inductive, interpretative, and based on a constructive standpoint. The quantitative strategy provides a research that is deductive, scientific and objective (Bryman & Bell, 2011, p. 40).

2.2.4 Quantitative approach
The quantitative approach is based on four main focus areas, which are the ability to measure, generalize, replicate, and investigate the causality. For example, the ability to measure refers to the researches ability to detect small variations in data, and the causality indicates that the correlations are valid and not incidental (Bryman & Bell, 2011 pp. 99-103). Advantageously for the strategy is that analysis can be performed repeatedly, and it is easy to prepare and execute. A quantitative approach is suitable when the sample is wide and the research not intended to be profound (Eliasson, 2010).

2.2.5 Qualitative approach
A qualitative approach implies that the empirical and analytical part of the research will be based mainly on words and not numbers. The strategy is more appropriate choice when the research is based on a small sample, takes place in a natural environment, and when the context is based on complex processes. Another characteristic is the ability for profound studies. Benefits by using this strategy are flexibility, since the research can be adjusted according to the specific situation and the gathering of data prolongs until considered complete (Magne Holme & Krohn Solvang, 1997, p. 80).

2.2.6 Chosen approach
To best answer the formulated problem, we considered the qualitative approach to be the method of choice. This study was specific for one company and the intention was to study the processes in their natural environment. This, together with the intention to conduct a profound study of the company, was the reason to why we implemented a qualitative approach. We considered a quantitative strategy to be inappropriate since the
information needed could not be collected through this approach because the study required data of qualitative nature.

2.3 Research method

An important factor of qualitative research is the relationships between the researchers and their subjects. One type of research method is known as action study design. The characteristics for this method are that the research is based on a specific problem, is an iterative process that results in changed behaviour and contributes to practice and theory. The method should fulfil a number of criteria regarding the processes and results. The consequences of the research should be related to other situations, orientated against theory, and the researchers should be aware of that their results will eventuate in actual and applicable implications for the participants (Bryman & Bell, 2011, p. 324).

2.3.1 Chosen method

Since the results of this essay were a product of collaboration between us and the company, the action study design was considered well suited. The study was also based on a specific problem that was to be solved and the goal was to generate recommendations in order to change behaviour and procedures.

2.4 Research design

The research design sets the framework for the methods for the gathering and analysis of the needed data. There are five commonly used research designs, experimental, cross-sectional, longitudinal, comparative and case study (Bryman & Bell, 2011, p. 46). The case study design is commonly used in qualitative researches because the design enables the researcher to tackle questions focused on current events, for example processes within an organisation. It is also suitable for studies in natural environments and when
it is difficult to separate events and context. A research design should include descriptions for gathering data, a well-defined case and methods for analysing (Yin, 2011, pp. 22, 31 & 47).

2.4.1 Case study design
Benefits from a case study design are that it entails an iterative and flexible process, which means that the methods can be changed throughout the research (Yin, 2011, p.84). The drawback that arises is the lack of generalization, but according to Yin (2011, pp.27-28) this critique is based on common presumptions that refer to the statistical and not the analytical generalization. Statistical generalization focuses on frequencies, which means that the results can be generalized from the sample to the whole population. The analytical generalization intends instead to generalize the results to other similar cases with the same conditions. Yin (2011, p. 67) describes two types of case study designs, a design based on a single case and a design based on a number of cases. The latter is appropriate when the research contains several cases in order to study a problem.

2.4.2 Chosen design
We have chosen to implement a case study design since our essay was focused on an actual situation within a company. Other characteristic of the study that was consistent with the case study design was that the research took place in a natural environment, during a specific period of time. The design enabled us to better understand the complexity of the processes involved by focusing our attention to this single case. We also argued for using a case design based on several cases since our study involves three offices addressing the same problem.

2.5 Quality measures
Bryman and Bell (2011, p. 307) presents four criteria to measure the quality of a qualitative research, the reliability, transferability, dependability, and the
possibility to strengthen and confirm. Yin (2011, p. 54) describes four similar measures specific for a case study design, external and internal validity, reliability and the validity of terms.

2.5.1 Reliability and validity of terms
The research’s reliability depends on whether others can consider the results and chosen perception of reality to be acceptable (Bryman & Bell, 2011 p. 307). Yin (2011, p. 56) emphasizes the importance of valid terms. This means that data and information used should be considered to be valid and related to what is being studied. Actions to increase this validity could be using more than one source or in some other way ensure that the information is valid.

2.5.2 Transferability and external validity
Transferability can be explained as the results ability to be generalized and put into other contexts. Qualitative research strategy is known to focusing on specific cases, and is more often orientated towards profound analysis than generalization. This means that the results of a qualitative research cannot always be transferred to another context (Bryman & Bell, 2011, p. 307). In contrast, Yin (2011, p. 57-58) refers to this measure as the external validity and as mentioned, the author considers that generalization can be divided into two parts, statistical and analytical generalization.

2.5.3 Dependability and internal validity
The researcher must be able to ensure that the research is dependable. This can be done by carefully explaining and describing the different phases of the research. This can also be done, by letting an outsider scrutinize the methods and approaches (Bryman & Bell, 2011, p. 307). According to Yin’s (2011, p. 56), the corresponding term is internal validity. He explains that the term is relevant only when the research proves causality and is explanatory.
2.5.4 Ability to strengthen and confirm

Researchers must be able to prove that they have not implicated their own values and opinions throughout the study. This is an important part of ensuring that the research’s results are valid and objective. Bryman & Bell (2011, pp. 306-308) describe this as the ability to strengthen and confirm the results. According to Yin (2011, p. 59), reliability is a term of importance since this allows others to execute a research based on the same approach and enabling them to reach the same results.

2.5.5 How to ensure the quality of the study

To increase the validity of the terms, we continuously asked our supervisor for criticism.

The criterion for transferability and external validity was hard to achieve since the generalization is limited as a case study design was implemented. However, we strived to attain a reasonable level of analytical generalization by basing our assumptions on acknowledged theories.

By thoroughly explaining and illustrating the implementations of this study, we were able to meet the criteria for internal validity and dependability. This is because the reader will be thoroughly presented to assumptions and methods that the analysis was based on. We also designed the interview guide so that it consisted of no leading or deceptive questions, which could have given us misleading answers.

Regarding the ability to strengthen and confirm the results it was important to not be influenced by pre-conceived opinions, but it was difficult for us to review this matter. As mentioned before, our study was continuously revised and this assured that this risk was lower. This criterion was also assured by an extensive mapping of our methods so that another researcher could replicate the study. One contradiction was that our subject demanded anonymity, which reduces the reliability since no replicating study can be done.
2.6 Information Gathering

2.6.1 Primary and secondary data
There are two types of data that can be collected, primary and secondary data. The primary data is gathered by the researchers themselves for the specific study, and is often a costly and time consuming process. The researcher can also use data already gathered by other researches, which is referred as secondary data. This type data is less time consuming and not as costly, but the researcher must consider the drawback that the prior researcher could have had a different purpose (Bryman & Bell, 2011, pp. 230-231).

2.6.2 Methods
There are several methods for collecting data and information for the intended research. Yin (2011, pp. 111-125) mentions commonly used methods for case studies. One way to gather information is by reading documents in the form of letters, protocols and other internal documentation. Another source is archival material in form of data files containing registers and listings. Interviews are one important source of information and are generally seen as a foundation in case studies. Depending on the information that intends to be gathered, the researcher can use different approaches.

2.6.3 Gathering of theory
The theoretical frame used in this study was based on literature and articles. Subjects sought for in the literature were standardization, process documentation, decentralization and revenue recognition. To provide a broader frame of reference the essay was also based on information from articles. These were collected from databases as Business Source Premier, Google Scholar and Emerald, using keywords as: Standardization, Process Documentation, Work in Progress, Revenue Recognition and Decentralization. Information was also collected in the form of internal documents originated from the company, presenting rules, recommendations, models and information for actual projects.
2.6.4 Gathering of data

The primary data can be gathered through interviews, designed in several different ways depending on the information that are to be gathered. Bryman and Bell (2011, p. 361) describes three different designs for setting up interviews. These designs are structured, semi-structured or unstructured. When used in a qualitative research the design tends to be unstructured or semi-structured. This is because the researcher wants to understand the object’s position and perception. A structured design is commonly used when a quantitative approach is applied. The purpose of this design is to achieve the highest validity and reliability. While the semi-structured design gives the researcher a tool to combine the advantages of the other two, the possibility to get a better understanding of how the object thinks and also a high level of validity and reliability (Bryman & Bell, 2011, p. 361-363).

To extract information from the interviews a researcher can implement the use of codes. This coding makes it possible to obtain an overview of the gathered data. When using the method, the researcher scans the texts and tries to find recurring themes and phrases that can be used to extract information from the data. Examples of coding can be, negative attitudes, sense of problems, criticism and more (Bryman & Bell, 2011, pp. 457-461).

2.6.5 Chosen approach for the gathering of data

For this study, no secondary data were used. The intention was to carry out qualitative interviews in the three offices in order to collect the primary data concerning this case. The interviews were executed by using a semi-structured form. By using this form of interview, we were able to ask further questions based upon the answers of predetermined ones. In order to facilitate and structure these interviews, we formed an interview guide. This guided us through the interviews and made sure we did not forget any essential questions. By asking similar question to the objects we were also able to compare the answers in order to spot differences. Since a semi-structured
approach was used the interviews were also based on openness as the objects were allowed to speak freely. This in order to get information not covered in the interview guide.

By marking the answers according to which theme it was connected to, we were able to structure the data for further analysis. This facilitated the structuring and provided us with a better overview of the gathered data.

2.6.6 Interview guide

An interview guide is a list of questions or areas that should be covered by the interviews. When designing the guide one should consider a number of things; to group the questions into themes, not to ask leading questions and use an intelligible language. Kylén (2004) describes the importance of having a guide that is neither too long, nor too short and the guide should involve four to six themes. During semi-structured interviews a guide can be helpful to lead the conversations in the right direction. This is important when the interviews intend to result in comparable data as the interviews will tend to supply similar answers (Bryman & Bell, 2011, pp. 369-370).

Since we intended to compare the three offices, it was important to gather comparable data. Our interview guide facilitated the execution of the semi-structured interviews and ensured that the gathered information could be used for comparison. The guide was designed from the basis of themes originated from the selected theory in order to guarantee that the right information was gathered. The guide was structured from five themes of, attitude towards standardization, decentralization, process documentation, percentage of completion and frameworks. These were the foundation of the study as both the empirical as well as the analytical section was based on it.
2.7 Sample

When determining the researches sample, several important aspects need to be considered. First the researcher needs to determine if the sample should be decided by probability or not. The probability approach will results in a sample that is representative for the population as a whole while a non-probability sample is not (Bryman & Bell, 2011, p.110). Patton (1990) claims that the sample is one of the most important differences when comparing qualitative and quantitative researches. A qualitative research does not require a sample as extensive as for a quantitative one since representatively is not the goal.

2.7.1 Probability based sample

There are several methods to use when implementing a probability based sampling. Shared for all these are that they are all based on the principle that all objects in the population should more or less have the same opportunity for being selected. These methods are an appropriate choice when the study’s goal is to achieve a high level of generalization, as long as the size of the sample is adequate (Bryman & Bell, 2011, p. 121). Patton (1990) argues that the number of people interviewed is not as important as the researches aim for profound analysis and the ability of generalization is allowed vary. What matters is that the researcher collects an amount of information enough to draw adequate conclusions.

2.7.2 Non-probability based sample

The main drawback of implementing a non-probability based sample is the lack of generalization since the sample will not be representative for the whole population. Examples of methods to use are snowballing and sampling based on convenience. A sampling based on convenience means that the sample will consist of respondents that currently are available for the researcher. If using the method of snowballing the researcher initially determines the sample from a small group, and then proceeds according to
this group’s recommendation. As for all the non-probability based methods, the method of snowballing suffers from a lack of generalization (Bryman & Bell, 2011, p. 378).

2.7.3 Chosen sample
To gather the information required for the study, semi-structured interviews were to be performed at each of the offices. The sample for this study was determined by a non-probability sampling since the objects to interview were based on convenience. This is because we started the sampling by interviewing our initial contact within the company. The contact then gave us recommendations on who to interview next. We argued that the contact person had a better insight regarding to whom was the most suitable employee to interview. A sample based on this method gave us a sample with the insight needed for the study. The respondents were company controllers or other personnel in superior positions that could serve us with information regarding their operations. By doing this, we got an understanding in what managerial advantages the current system had and we were be able to figure out what disadvantages we needed to oppose.

2.7.4 Respondents
The respondents of this research were Controllers of each office, with responsibility for managing projects.

Office A: Head of Project Control
Office B: Team Leader of Project Control
Office C: Head of Project Control

The initial idea was to visit the three offices to carry out the interviews in order to get a better understanding for how their operations were carried out. Since the company could not dispose the time needed this possibility was no longer an option. Instead the interviews were performed by phone. If we
considered there to be a lack of information, we asked further questions by e-mail.

### 2.8 Summarizing model

![Summarizing model diagram](image)

*Figure 2. Summarizing model*
3. Theory

This chapter will present the theory concerning the subjects of decentralization, standardization, implementation process, process documentation and revenue recognition. The chapter will describe the aspects of a decentralized organisation, the process for initiating standardization, how to implement and document the processes involved and also the important aspects of how to apply revenue recognition.

3.1 Decentralization

Decentralization is a useful tool for managers when delegating responsibility from the central administration to the company’s units. Delegating responsibility is important since central management cannot know all information regarding different units, and better decisions will be made in the units. This is because units possess better knowledge about their processes (Kaplan & Atkinson, 1998, p. 288).

It has been proved that decentralized organisations also provide services and execute processes more efficiently than organisations with a sole decision maker (Klugman, 1994; Rodríguez-Pose & Bwire, 2004). One of the main advantages with decentralized organisations is the information specialization, meaning that unit managers have better knowledge about their own processes. This knowledge could be used to make faster decisions, which would increase the efficiency within the units and in the company as a whole (Kaplan & Atkinson, 1998, p. 291). However, decentralization does not necessarily result in higher efficiency, because of the possible loss of economies of scale (Klugman, 1994).

By decentralizing the decision making within an organisation, both the quality and speed of decisions tend to improve. The quality improves since decisions are made by managers with the most knowledge in the area, and the
speed increase since there is no need to contact headquarters for answers. By letting the units take care of day-to-day decision making, headquarters can focus on strategy and more long-term operations. But since headquarters has to rely on reports made by unit managers, it is important that these are reliable. Because of this, headquarters often set rules and constraints for units, which creates uniformity (Anthony & Govindarajan, 2007, pp. 187-190)

3.2 Standardization

Standardization of processes is described by Ross et al. (2006, p. 27) as: “…defining exactly how a process will be executed regardless of whom is performing the process or where it is completed”. Standardization creates predictability within companies, which results in more time for managers to invest in value creating activities (Ross et al. 2006, pp. 5, 27). Another definition is described by Jang & Lee (1998, p. 69) as: “…the degree to which work rules, policies, and standard operating procedures are formalized and followed”. This definition highlights the importance to have autonomous work processes to establish routines in projects (Jang & Lee, 1998). By using standardized procedures, all processes within organisations will become more of routine. It is an upward-sloping trend to use standardized models, and new standards are developed worldwide because of the many advantages (Ungan, 2006a).

Standardization is desired because of the many benefits it entails, such as increased efficiency, easier process control and a positive perception of service and product quality (Ungan, 2006a). In decentralized organisation there is also a need for management to compare units. Standardization facilitates comparison because it increases understanding of procedures in different units (Anthony & Govindarajan, 2007, p. 435).
According to Jang and Lee (1998) one advantage with standardized procedures is that it allows employees to focus on exceptional problems instead of routine tasks. Another advantage is that standardization increases efficiency in simple, repetitive tasks. Ungan (2006a) describes that standardized procedures raises efficiency by increasing consistency in operations. It has also been claimed that standardized processes damage innovations (Ungan, 2006a). Ross et al. (2006, p. 27) also states that standardization inhibits the local innovation. In a standardized company there is no room for local innovation because all processes being performed are obliged to be done according to headquarters recommendations. However, political conflicts can occur while implementing standardization in organisations where well-functioning processes already are in use. In these companies, units may have to abandon locally developed processes and replace them with inferior centrally developed ones (Ross et al. 2006, p. 27).

To standardize operations within a company one first need to create or identify well working methods, and second to make accurate documentation of the steps within the operations. When documenting these steps it is important to relate to rules and recommendations set by law or management (Ungan, 2006b).

### 3.3 Implementation process

Münstermann et al. (2010) has created a model for standardization based on two models created by Ross et al. (2006) and Münstermann and Weitzel (2008). The model consists of two steps. The first is to detect a working strategy for the implementation (Ross et al., 2006, pp. 25-26), and the second is to determine an appropriate approach for the standardization (Münstermann and Weitzel, 2008).
3.3.1 Determine strategy for the Implementation

Standardization of business processes is described as a management tool for creating predictability and efficiency within the organisation. By using standardization, processes can be measured, compared, and improved. Integration is described as the sharing of data between business units. Sharing of data enables business units to work together and develop joint plans for business related operations. Integration enables management to make better decisions based on high quality information and also leads to benefits as increased efficiency, coordination, transparency, and agility (Ross et al., 2006, pp. 27-28).

The first part of the implementation model seeks to answer two questions, which will form the foundation of the process. (Ross et al., 2006, p. 30) These questions are:

“To what extent is the successful completion of one business unit’s transactions dependent on the availability, accuracy, and timeliness of the business units’ data?”

“To what extent does the company benefit by having business units run their operations in the same way?”

The first questions answer to what degree companies request integration, and the second determines the need for standardization. The authors claim that standardization and integration is two separate things, even though people consider them to be the same. Based on the answers, the company can be positioned into one of the four squares in Figure 3.1, in order to detect the need for standardization and integration within the company (Ross et al. 2006, pp. 27-28).

1 Ross et al., 2006, p. 30
2 Ibid.
The model contains four different operating models, which represents different implementation strategies. In the Coordination operating model, the companies are requesting high levels of integration but little standardization. In this model, companies have unique value adding operations, which disable them to use standardized performance. These companies demand high levels of integration, because they share mutual customers, products, suppliers or/and partners. In this type of companies, it is not usually low costs that are inquired for; instead the primary driver is customer service (Ross et al., 2006, p. 33).

In the Replication operating model, the companies are requesting high levels of standardization, but have low interest in integration. This type of companies has similar value adding operations, which makes standardized
processes a business-advantage. Because the companies in this category do not share costumers, products, suppliers or/and partners, there is no need for integration. These types of companies are dependent on global innovation and every business is using a set of standardized business processes (Ross et al., 2006, p. 33).

In the Unification operating model, the companies are requesting high levels of both integration and standardization. In this model, business processes are standardized; units share information, and work together as teams. The companies usually shares supply chains and transaction data. This supports global integration, increases efficiency, and makes the companies interdependent (Ross et al., 2006, pp. 36-37).

In the Diversification operating model, the companies are requesting neither integration nor standardization (Ross et al., 2006, p. 29).

Usually, companies are able to find components from each of the four operating models to fit the needs in their units. However, it is important for the companies to choose a single model to help them in their managerial processes (Ross et al., 2006, pp. 39-40).

3.3.2 Determine the appropriate method
The second part of the process is made in two steps; the business process homogenization and business process standardization. When using the business process homogenization, an archetype process is chosen from already existing processes, or created if the ones in use are not suitable or non-existing. Further on the companies have to rework their processes in order to adapt with the archetype one. The second step in business process standardization. The work with adapting the procedures for operating in line with the archetype process is enhanced. At this stage, the archetype process is developed into a standard and other processes are being modified to serve the same functions (Münstermann & Weitzel, 2008).
To be considered a standardized process, the following requirements have to be achieved: the business process has to be modelled and documented in written form. It has to be possible to divide the process into smaller steps, which are all suggestive and meaningful. The steps have to be described in a specific way, so that as few steps as possible can explain complex procedures. If possible, the steps should contain the best working procedures, meaning that the company uses best-in-class processes (Münstermann & Weitzel, 2008).

3.4 Process Documentation

3.4.1 Difficulty in communicating knowledge

By saying “we know more than we can tell”, Polanyi (1966, p. 4) describes that human knowledge is mainly tacit. As an example he refers to the fact that the common person can recognize a face among thousands, even though he cannot describe how the face is recognized. In other words, there is knowledge that cannot always be explained. A method for describing and teaching knowledge that circumvents the issue of not being able to communicate it, is by demonstration. By doing so, the knowledge is not being communicated, because it is up to the pupil’s intelligence to understand and perceive what is being experienced (Polanyi, 1966, p. 5). Because of the difficulty to express knowledge, process documentation is hard managed. Since process documentation is the foundation when standardizing an organisation, the difficulties of documenting can be considered one of the main problems with implementing a standardized process (Ungan, 2006a).

There are two types of knowledge that needs to be reported in process documentation, know-how and information. Know-how is defined as the instructions telling us how tasks should be executed in order to reach the desired results. Information in process standardization is defined as the
knowledge that tells facts about what is included in the process (Kogut & Zander, 1992).

3.4.2 Documentation
Ungan (2006b) reports that flowcharts and process mapping are commonly used tools for describing processes within organisations. By using tools for characterizing processes, the procedures can be communicated to co-workers and make learning of the procedures possible. Some companies use process documentation in order to get better understanding for their procedures, which make it possible to detect and eliminate non-value adding activities. Examples of such activities are overly complicated or unclear processes; unnecessary transportation of products, workers, or customers; waiting, et cetera (Rohleder & Silver, 1997).

3.4.2.1 Select a process
Process documentation consists of seven steps, all necessary for capturing the essential knowledge of an operation (Ungan, 2006b). In the first step called select a process, companies should decide about what process to document. The companies should primarily choose processes that are in the need for evaluation in order to reduce non-value adding activities or processes, which are intended to be standardized (Ungan, 2006b).

3.4.2.2 State the objectives
In the second step, called state the objectives, companies are supposed express the intentions of the documentation. There might be different objectives with process documentation such as improving, standardization re-engineering, or just describing a process (Ungan, 2006b).

3.4.2.3 Determine the level of detail
In the third step called determine the level of detail, companies are to state and specify the degree of detail that has be chosen for the process documentation. The facts about which degree of detail to choose are
inconsistent (Ungan, 2006b). Babicz (2000) and Dichter (1994) say that process mapping must be short and clear, because if not, it will be hard to comprehend. On the other hand, Symons and Jacobs (1997), say that the documentation must be at a significant level of detail, in order to make improvements possible. Janzen (1991) and Ungan (2006b) consider that an ultimate level of detail cannot be identified, but that it must be determined depending on the purpose of the documentation. Since studies are contradictory and no obvious path can be chosen, the solution is to investigate the required level of detail in each project (Nesbit, 1993).

3.4.2.4 Form a team or select an interviewer

In the fourth step the companies decide on how data are to be collected. Companies can either form a team or select an interviewer to gather information about a specific process. A single interviewer is preferred when mapping uncomplicated processes with few employees concerned, and are therefore not suitable for documenting large scale and complex activities. The approach is claimed to have difficulties to mediate different opinions, achieve group consensus on how to solve problems (Nesbitt, 1993). Group methods are considered to be the most suitable for documenting processes in great detail. By studying the process, the method counteracts the negative consequences that arise when using a single interviewer (Ungan 2006b).

Since documentation used for standardizing companies are in need for high detailed reports, team methods are the preferred course of action. When documenting in order to standardize a process, the performers of the best-in-class activities are supposed to be the ones documented. These performers possess the tacit knowledge and can be called the process master. The use of a team helps the process master to put the tacit knowledge into words, which can be problematic to do independently (Ungan, 2006b).
3.4.2.5 Define the process

In the fifth step documentation is made about the purpose of the process. In this step, the team or interviewer explains why the process has been implemented, what it intends to achieve and who is affected by it. The team or interviewer also lists the input, output, customers, and suppliers of the process (Ungan, 2006b).

3.4.2.6 Identify performance measures

In the sixth step decision is made regarding how measures are to be collected about process performance. There are two sets of measures to choose from; effectiveness, efficiency and adaptability, and; cycle time, cost and quality (Ungan, 2006b). In the first set of measures, effectiveness indicates how well the process achieves the stated objectives. Efficiency measures the effort and resources required to achieve desired results in a process, and adaptability measures how smoothly the process will adapt to other objectives (Rohleder & Silver, 1997). The set of measurement including cycle time, cost and quality can be used in all types of processes (Ungan, 2006b).

3.4.2.7 Acquire the knowledge of process participants and document it

In the seventh and final step called acquire the knowledge of process participants and document it, the team or interviewer collects information from the process master and document it. The information collected is supposed to be as accurate as possible compared to the actual execution of the processes, and should not be based on how the processes are supposed to be carried through (Ungan, 2006b). It is desirable that the documentation of the process captures the tacit knowledge from the process master. This can be difficult to achieve and it has been discovered that the way to accomplish this is through communication and close interaction (Ungan, 2006b). To help communication between the process master and the interviewer it is necessary for them to develop and use a mutual language (Zack, 1999).
Ungan (2006a) points out that process documentation is an iterative process. After the flowchart or process mapping has been developed, it is important for the team or interviewer to keep adjusting shortcomings until consensus has been reached (Biazzo, 2000). The process is supposed to be documented only when the team or interviewer together with the process master reaches an agreement about how a process should be described (Ungan, 2006b).

3.5 Revenue Recognition

There are two methods when using revenue recognition; CC and POC. When applying CC, no revenues are to be accounted for until the project is finished. When using POC, revenues and costs are to be accounted for according to the
projects degree of completion (Smith 2009, pp. 140-141). POC can also be described as a method for recognizing the revenues for projects depending on the progress for each year of construction (Elliot & Rogers 1975). If revenues for a period are not accounted for, no income tax has to be paid until the revenues are put into the books (Jensen & Craig 1998).

According to the IFRS-recommendations, POC is the only method allowed for revenue recognition in listed companies. CC is only to be applied in non-listed companies, but POC is also allowed (Smith, 2009, pp. 140-141). According to IAS 11, POC should be used by all construction companies who have projects reaching over more than one financial period. The degree of completion can be estimated by the relationship between paid expenses at the end of a period, and total expenditures for the whole project. It could also be measured by the project’s physical degree of completion (IAS 11).

A problem with using POC is to correctly measure the degree of completion for projects. If the degree is based on costs, it could be misleading. This because a great amount of completion will be achieved when the most expensive parts of the project are completed. If there are no great revenue generators at that time, revenue will appear when there is no real progress. This can be solved by creating physical measurements of the project’s progress (Smith, 2009, pp. 145-146).

3.5.1 Accounting principles

The revenue recognition process is mainly affected by three principles of accounting; the realization, precautionary, and matching principle (Smith, 2009, p. 138). The realization principle explains that the revenue should be put in the books at the time of the sale, even though there has been an increase in value before this moment. In some cases, there are other critical moments more suitable when accounting than actual sale to use for revenue recognition. When using revenue recognition, there is a deviation from the
realization principle, meaning that revenues are not to be put into the accounting at the same time as the sale (Smith, 2009, pp. 80-81, 142).

The matching principle advocates that revenues and costs should be put into the accounting at the same time. The meaning of the principle is that revenues and costs should be determined at the same time. Problems arise within this principle when determining what resources are used to generate revenue (Smith, 2009, pp. 81-85).

The precautionary principle means that revenues should not be put into the accounting until they can be proved by evidence or verification. If there is an issue regarding the amount, the lowest should always be used when considering assets, and the highest when valuating debts (Smith, 2009, p. 86-89; FAR, 2011, p. 1586). When the planned expenditures of a project are likely to exceed revenue, the feared loss should immediately be put into the accounting (IAS 11). Ohlson et al. (2011) explains that loss should be recognized and put into the accounting as they are expected. If new information about reduction of loss appears, the loss should not be eliminated from accounting. If CC is applied, expected loss should be considered when the project is finished. This is in line with the precautionary principle, which says that losses should be realized as soon as they are concerned (Smith, 2009, pp. 87, 149).
4. Empiricism

The chapter will present the empirical information gathered. Firstly, information about the company is presented followed by a compilation of the frameworks used within the company. This is followed by a review of each office. The reviews will be based on approximately the same themes as the interview guide. Central themes are the offices attitude towards standardization, their process documentation, usage of frameworks, usage of percentage of completion, how they determine milestones and their handling of milestones achievement.

4.1 Company Information

The examined organisation is a multi-national company that delivers components and services in the electric power generation industry. The company has three producing units located in Sweden, one head office and a few service offices, which employs about 1000 people. The global workforce consists of 90000 employees distributed in 100 countries. Since the company operates globally, the organisation is highly decentralized. According to the Head of Project Control in office A (2012-03-26), this is a necessity since they need to cover large geographically areas. The contracts sold by the units are highly differentiated from each other, and often reaches over more than one year. The company recently introduced an idea which consists of a mutual economic system for all offices. This will allow them to share co-workers with no need for extra training. It will also simplify comparisons between units, and help the employees to get a better understanding about the organisation (Head of Project Control, Office A, 2012-04-13).

The company has developed a reporting and accounting manual (RAM) in order to ensure that operations are executed according to laws and corporate regulations. These guidelines are supposed to facilitate for units when
reporting revenue recognition and have been constructed to follow the accounting recommendations set by IASB. Each unit has developed their own procedures for revenue recognition based on corporate guidelines (Head of Project Control, Office A, 2012-04-13).

According to RAM, POC is to be used when accounting for projects reaching over more than one year. The method allows the company to better monitor the profitability of on-going projects. Since it is used for both financial and management accounting, it means that POC serves external as well as internal needs (Head of Project Control, Office A, 2012-04-13).

4.2 Company frameworks
At present the offices use two frameworks, which contain guidelines and regulations, set by headquarters. These frameworks are called RAM and Financial Guidelines. RAM declares how to apply POC, determine and achieve milestones, and handle uncertainty. The Financial Guidelines consist of a summary and practical advises in how to manage POC in projects (Head of Project Control, Office A, 2012-03-26).

4.2.1 Reporting and Accounting Manual
The framework separates four types of transactions called product contracts, short term service contracts, construction contracts, and long term service agreements. Product contracts involve manufactured products, and declare that revenue should be accounted for when the product is delivered. These products are produced in a short amount of time, and it is therefore no need for revenue recognition (RAM).

Construction contracts are contracts that reach over several years, and are established together with customers in order to construct facilities. Different services and departments within the company are usually involved, such as engineering, construction and project management. Long term service
agreements are service contracts exceeding one year and short term service contracts are completed within one year. Product contracts and short term service contracts should recognize revenue when products are delivered, while construction contracts and long term service agreements recognize revenues using POC (RAM).

4.2.1.1 Percentage of completion
Revenue should be valued at the corresponding contract value, which According to RAM is the same as fair value. Contract value is established by using sales price with reservation for possible penalties, liquidation damages, or probable claims. Payments received from customers will be planned throughout the entire lifetime of a project. It is important that payment received and revenues are separated, since customer payments do not represent any progress within the project. If future costs and revenues of a contract are likely to occur, POC is to be used and the degree of completion should be measured with milestones (RAM).

4.2.1.2 Determining milestones
Milestones represent events in projects, for example when the foundation has been completed or when a large cost has occurred and should be easy to identify and represent work performed. When a project starts, it is the Project Leader task to construct a preliminary list of milestones. The list is established by the Project Controller and later validated by a superior department within the company. After milestones have been determined, the project gets a note to proceed, and to begin. If there are no defined milestones for a project, no revenue can be recognized. When set, the definition of a milestone is not allowed be changed. During projects, there are five main categories of milestones called design, equipment, erection, start-up, and performance test. These milestones are divided into smaller ones, and the amount of revenue to be recognized in each milestone is determined by
comparing cost of milestone to the total cost of project. No milestone should be less than 1% or more than 10% (RAM).

4.2.1.3 Achieving milestones

In order to achieve milestones, some sort of verification has to be presented, either external or internal. Reviews of projects should be done regularly, and the extent of the review depends on the size of the project. If a milestone is not completed during the preliminary date of completion, the date is changed to later. Project review should be done within three to six months interval. The financial aspect of the review considers evaluation of selling price, analysing of actual cost, and other financial matters. All reviews should be put into the books to make the accounting more accurate compared to real project progress. The dates are reviewed once every month to keep project process in track (RAM).

4.2.1.4 Uncertainty

If it is likely that project cost will be higher than revenues, expected loss will immediately be recognized. The amount of loss depends on the degree of completion within the contract. If, after reviewing, the uncertainty about the project is lost, milestones will change back into the original amounts (RAM).

4.2.2 Financial guidelines

The Financial Guidelines provide information about rules and recommendations that needs to be taken into consideration when performing revenue recognition within the company. The Financial Guidelines describe the different responsibilities in projects. It is the Project Controller task to set up valid documentations of proposed milestones and forecasting future revenues in co-operation with the Project Manager. The Unit Controller is responsible for updating the list of milestone developed by the Project Manager and Project Controller. The Project Controller is also responsible for making sure that all documents are properly recorded and that correct amount of revenue is reported (Financial Guidelines).
The guidelines clarifies that POC has to be used in construction contracts, and that milestones should be used as measurement for the degree of completion. According to the guidelines the amount or content of milestones could differ between projects in order to retrieve a good match between milestones and actual projects. The guidelines also state that the Project Controller needs to keep track of all documentation of milestones. Milestones must not be changed during projects, and margin is to be calculated for when a milestone has been achieved (Financial Guidelines).

4.3 Review of Office A

Office A constructs large facilities that require expensive equipment, a considerable amount of construction, and engineering. The projects often reach over several years.

4.3.1 Attitude toward standardization

The Head of Project Control in Office A (2012-04-27) is of the opinion that standardization will provide substantial benefits, but that some level of independence is necessary because the projects are not executed equally. Standardization will make sharing employees possible since personnel already will possess the essential knowledge for each of the offices’ procedures. Standardization is not considered to inhibit local innovation, because strict corporate rules and frameworks already compromise it.

The Head of Project Control in Office A (2012-04-27) says that by working together with other units will promote learning within the company. When working together, the knowledge of the employees will be transferred to all personnel and the knowledge base will grow.

4.3.2 Process documentation

As of today, the office has no established routines for how to document the processes, but there is a generally accepted approach for how specific
procedures should be executed. For example, when a Project Manager asks for a specific document, it is not always evident where it can found. It is up to the Project Controller to ensure that the tasks of projects are executed as agreed (Head of Project Control, Office A, 2012-04-27).

There are no flowcharts or similar methods for defining the processes, but the unit do have the required resources for developing them. (Head of Project Control, Office A, 2012-04-27).

4.3.3 Frameworks
The frameworks used in the office, in order to execute the projects are RAM and the Financial Guidelines. These guidelines are sufficient to enable them to carry out the projects (Head of Project Control, Office A, 2012-04-27).

4.3.4 Percentage of completion
In order to forecast, control, assess, and review projects, the unit has developed a model regarding their usage of POC. The model consists of an Excel-document in which project specific numbers are inserted. The unit uses a predetermined set of milestones as a foundation for their projects and these can be customized depending on the type of project. The progress of projects is then recognized by the degree of completion that the achieved milestones represent. The list of milestones is reviewed every month to ensure that the project status is up to date, and the whole project is reviewed every three months in order to contribute to the quarterly reports (Head of Project Control, Office A, 2012-04-27).

The Excel-document is filled with numbers and information as the project progresses. The model is based on the regulations presented in RAM. Office A has two sheets regarding the milestones, one describing and arranging them in order to the categories and one where revenues and cost are entered (Head of Project Control, Office A, 2012-04-27).
4.3.5 Determining milestones

It is important that the process of determining milestones is done correctly since they cannot be changed. Once set, the office can only change the date for accomplishment. The process of determining milestones starts when the initial tender is created. The tender contains information about all cost drivers, sorted into five main categories called studies, erections, ready for start-up, performance tests, and equipment. These categories are divided into milestones, which in turn represent a share of the total category. The intention is to match the milestones with the progress by using actual costs of the projects. Since the main activity of the office is to provide the customer with facilities. These facilities are material intensive and equipment is therefore their largest category (Head of Project Control, Office A, 2012-04-27).

As of today, there are no rules regarding the process for defining milestones, but it is the provider’s responsibility to define for current milestone. The milestones are set by the Project Manager, the Project Planner and the Project Controller. The milestones are determined mainly by the percentage rate of the total cost, but in some cases this is not possible because of uncertain measures of assessment. No milestone should exceed 10% of the total value of a project. If a milestone exceeds 10%, it is divided into smaller shares. The purpose is to achieve a revenue recognition as evenly distributed as possible. Before the projects starts, milestones must be validated by a superior unit. Depending on the size of the project the authority for validation alters (Head of Project Control, Office A, 2012-04-27).

When the milestones are set, they are inserted into the Excel-document for the project. The description and requirements for the milestones are entered according to the categories, and the description is also entered into the sheet showing the progress of the project (Head of Project Control, Office A, 2012-04-13).
4.3.6 Achieving milestones

When deciding dates for milestone achievement, decision makers try to match the dates for key events stated in the contract. The approach makes it easier for the Project Controller to provide the evidence, proving that milestone achievements. When the dates coincide, it is possible to acquire external documents proving that progress has been made. The Project Controller can also generate such documents internally for proving progress. As of today there are no stated regulations within the office of what is considered an acceptable document. External documents are preferred, but not mandatory (Head of Project Control, Office A, 2012-04-27).

According to the Head of Project Control (2012-04-27), problems appear when milestones are considered to be achieved, but small components are missing, and the milestone can therefore not be achieved. These problems can be solved by using more specified milestone definitions. The milestones are supposed to be connected to customer payments, because it creates natural documents for when the milestones are achieved. It is the Project Controller’s assignment to detect and document milestones when they are achieved, but it is the Project Manager that is in charge for the documentation to be executed.

It is important that milestones are defined properly or else problems may occur when to consider them achieved. When milestones are completed, the revenues and costs are put into the accounting, and the Excel-document is updated to present the progress of the project. This is entered in the sheet regarding the progress of the project (Head of Project Control, Office A, 2012-04-27).

4.4 Review of Office B

Office B produces components and services for large electrical facilities in power generation. In general their projects reach over eight to ten months.
Despite the relatively short projects, the unit apply POC when running their projects.

**4.4.1 Attitude toward standardization**

The Team Leader for Project Control (2012-05-04) thinks that standardization is necessary for the company since it will result in reducing the personnel needed. It also contributes to better understanding about the procedures. This is needed since there is a lack of understanding of who is responsible for what. This is not considered to be a great issue within the unit since no problems occurs in about 90% of the cases. Even though this is satisfying, the unit wants to achieve complete understanding over their processes (Team Leader of Project Control, Office B, 2012-05-04).

**4.4.2 Process documentation**

Every time a change occurs in a project’s processes, it has to be documented and taken into consideration when planning for the future. The planning reaches two to three years ahead and includes all customer payments. By documenting the progress, the planning can be verified and becomes more accurate. As of today, there are no common rules about how to follow up documentation of revenue recognition, since there are no resources to apply it (Team Leader of Project Control, Office B, 2012-05-23).

According to the Team Leader of Project Control (2012-05-04), the main problem in their POC process is the lack of documentation. There are no standards regarding to what part of the process that should be documented, and to whom the documentation should be sent. The Team Leader of Project Control (2012-05-04) states that their method is satisfying, but that they are facing problems regarding how and when to document. There is not always a clear understanding of what operations to document, to whom the documentation should be presented for and where it should be stored.
4.4.3 Frameworks

The unit has created their own guideline for using POC called VLS. It has been completed by using from RAM, E-Book (Company rules) and QPR. Since they are obligated to obey both RAM and E-Book, they had to be used for references. QPR means that they have to review their projects once every three month. When milestones are to be set within the unit, standard reference milestones are to be used. The division has standard milestone categories set for each product (Team Leader of Project Control, Office B, 2012-05-04).

In VLS, there is a chapter called responsibilities where the obligations for all employees are stated. The Financial Department of the unit is responsible for ensuring that the guidelines is properly applied, and the Project Controller is responsible for the execution of all tasks in the model. There are also directives describing where the documentation should be preserved within the company (Team Leader of Project Control, Office B, 2012-05-04).

4.4.4 Percentage of completion

VLS needs to be applied for all projects and describes how milestones should be decided and when they are to be achieved. According to VLS the project needs to be reviewed once every three months. It is the responsibility of the Team Leader of Project Control to make sure that all rules and recommendations are followed. At the start of every project, the total sales price is divided into sections based on different types of physical operations. Physical operations are, for example, erection, engineering and start up. When these physical operations are completed, revenue can be recognized (Team Leader of Project Control, Office B, 2012-05-04).

The unit uses an Excel-document, where all milestones are defined, together with preliminary dates for achievement. Revenue should not be recognized when cash payment occurs, but when actual work has been performed. The Excel-document used in this office contains a sheet for the listing of the
milestones that are used to display the progress made in projects. The list does not show how the milestones are divided between the categories and the document is also missing descriptions regarding the documents required for proving achievement (Team Leader of Control, Office B, 2012-05-04).

4.4.5 Determining milestones
Milestones are determined shortly after the contract has been signed by the customers. The milestones will differ depending on the product manufactured and the degree of completion will depend on cost of milestone in relation to total project cost. A preliminary list of milestones should be sent to the global department of the unit in order to be approved. It is desirable that the milestones are equally distributed over time, but it is more important that they provide a good reflection of actual work. Some milestones, often erection, are larger than 10%. This happens when a considerable part of the costs occurs during a short period of time relative to the lifetime of a project. This is often the case since the office’s processes regarding erection are costly and relatively short. This is because customers may need to shut down their production while the erection is in progress, and a large amount of time is therefore spent on planning the erection. This is in order to make the process as short as possible. Since the degree of completion is based on costs, the amount of revenue recognized will be greater when costs are higher (Team Leader of Project Control, Office B, 2012-05-04).

When milestones have been determined, they are not to be changed during the project, besides from the preliminary dates. Every month, the Project Controller arranges a meeting with the involved parties of the project, and discusses whether the milestones can be reached at the preliminary set dates. If not, the dates are changed (Team Leader of Project Control, Office B, 2012-05-04).
4.4.6 Achieving milestones

All milestones are connected to a triggering event, and when that event takes place the milestones are reached and revenue can be recognized. The triggering event has to be easily identified and it has to be proven with externally generated document. All milestones should be verified by using external documents in order to prove them achieved. The reason is that external verification is harder to manipulate, and they therefore have more creditability than internal verifications. If it is not possible for the office to acquire an external document an internal document is acceptable. The documentation of the progress is important in order to show tax auditors that a milestone has been achieved, and for verifying that the correct amount of revenue has been recognized (Team Leader of project Control, Office B, 2012-05-04).

A milestone must be completed before considered achieved. Once the unit achieves a milestone, the Project Controller enters the value, required documents and marks that the milestone is completed in the economic system. For the office, this is the only way to check the progress made in their projects and they do not use any Excel-documents (Head of Project Control, Office B, 2012-05-04).

4.5 Review of Office C

Office C is a large supplier of services and components regarding power generation. Office C’s project reaches over several years and the office tends to have labour intensive projects.

4.5.1 Attitude toward standardization

The Head of Project Control in Office C (2012-04-30) consider standardization important in a large company, as it is believed to ease procedures for the personnel. However, the attitude is that the processes within the company are standardized enough, and no additional work is
needed. The already existing guidelines are the only ones considered necessary, and because no projects are exactly the same further standardization is believed only to complicate things. Because the products produced within the unit differ, implementation of standardization will make procedures more difficult when the office is forced to adapt. According to the Head of Project Control (2012-05-14) further standardization is not desirable since it is considered to increase the bureaucracy and workload for the unit. This will in turn decrease the office’s efficiency and in the end have a negative effect on their profitability. The office is determined that standardization of the concerned process is not possible since the operations differs too much between them. This calls for keeping the operations unique for each office.

4.5.2 Process documentation
There are no specified routines, only guidelines set by headquarters, for documentation during projects. Based on these, the office has developed unit-specific routines that are used to meet the requirement for certain documentations (Head of project Control Office C, 2012-04-30). According to the Head of Project Control (2012-05-14) the only requirement within the unit is to follow the list of milestones found in the Excel-document, and this is considered sufficient enough. There is no detailed documentation such as flowcharts or process mapping, to describe what documentation are required and the Head of Project Control (2012-04-30) argue there is a no need for such documents.

4.5.3 Frameworks
According to the Head of Project Control (2012-04-30) the office makes use of RAM and the financial guidelines set by Headquarters.

4.5.4 Percentage of completion
The office has developed an own model for using POC based on RAM. The model is an Excel-document, in which all procedures within a contract are
listed. Each procedure is represented by a predetermined milestone. The milestones are based on the costs associated with the current project and the goal is for the milestones to reflect the actual cost development. As the project proceeds the milestones are achieved and accounted for (Head of Project Control, 2012-04-30). The Head of Project Control (2012-04-30) considers that RAM makes a sufficient base for developing models for applying POC, and believes that because of the major difference in project, the units are in no need or room for further standardized POC.

The Excel-document developed within the unit contains a sheet where the milestones are entered according to date. The document contains the information about the requirements for achieving milestones, and the documents needed for proving this. Entered into this sheet is also the information regarding to what category the milestone belongs to. This list also displays the progress made in the project (Head of Project Control, Office C, 2012-04-30).

4.5.5 Determining milestones

The determination of milestones within the office is made by the Project Manager, who uses RAM as guidelines. By using RAM, the milestones will be in line with all the necessary laws and company rules. It is believed to be important that the milestones are formulated in order to be easily understood, and also to reflect the actual progress of projects. To ease future documentation, the Project Manager tries to set milestones together with naturally arisen external evidence, such as payment or external inspections. When milestones are determined, the documents produced are sent to the global headquarters for verification. The project can proceed when approved. This is the only interference done by headquarters during the whole project, unless problems occur.

When milestones are set, they are entered into the list within the Excel-document. The descriptions of requirements for achievement and the
documents proving progress are also entered into this sheet (Head of Project Control, Office C, 2012-04-30).

4.5.6 Achieving milestones

When a milestone is achieved there is a need to find verifying documents. The office has a database called Evidence, where documents confirming milestones achievement are collected. These documents are for example: E-mails, consignment notes, contracts or letters

The office requires one third of the evidence to be external, meaning that two thirds is allowed to be internal evidence. A milestone cannot be put into accounting if it is not proven to be completed. The system used is believed to be well-functioning since it makes processes easy to grasp, and no action for improvement can be thought of (Head of Project Control, Office C, 2012-04-30).
5. Analysis

This chapter will consist of a discussion regarding the theory and empiricism presented in the previous chapters. The discussion will be based on the formulated problems presented in the chapter of introduction.

5.1. Problem formulation 1

What factors differ between the three offices regarding the usage of Percentage of Completion?

When developing recommendations for the company to use for implementing a standardized POC, the three offices are compared in order to find similarities and differences. The factors concerned are attitude, process documentation, frameworks, the usage of percentage of completion, and determining and achieving milestones. Identifying these factors is the first step in the development of mutual recommendations.

5.1.1 Attitude toward standardization

The offices have different attitudes towards standardization. Office A and Office B considers it to be a good idea to make their operations as alike as possible. However, Office C believes that the units already are standardized enough, and that further standardization will damage the units operations and therefore decrease the efficiency. Office C argues that standardization will force them to change their locally developed process in favour for centrally developed, and therefore damages the innovation within the unit. Office A and Office B is of the opinion that standardization is a necessity. Office B considers that it will contribute to better understandings regarding the responsibilities, and also decrease the personnel needed. Office A believes that standardization will enhance the ability to share personnel between the units. According to the Anthony and Govindarajan (2007), standardization increases understanding and an implementation can therefore be considered
to contribute to a mutual utilization of the workforce. Unlike Office C, Office A does not think it will lead to decreased efficiency. They believe that by working together, knowledge base will grow and result in increased efficiency. According to Office A, standardization will not affect local innovation because it is already restrained by corporate rules and regulations.

5.1.2 Process Documentation
A general problem for all offices is the lack of established rules concerning how specific procedures should be executed. However, each office has individually developed routines. For example, Office A and Office B face problems in where to store essential documents. Office B has set rules about how this should be done, but these are not complied. Office A has no such rules and there is an uncertainty in where to find crucial documents. Office C has solved this problem by creating the database Evidence for storing these documents. According to the office, this solution facilitates their operations by making them easier to grasp. It also decreases the uncertainties regarding where documents are to be stored.

As of today, there are no existing flowcharts or process mapping describing how operations should be executed within the offices. According to Office C, there is no need for such documents in order to run the projects and a development of flowcharts or process mappings will result in no gains. Office B is of the opinion that such tools would enhance their operations and lead to increased understanding. However, the office does not consider them self to possess the resources needed. Office A is of the same opinion as but unlike Office B they consider them self to be able to develop such tools.

5.1.3 Frameworks
When comparing the three offices it clear that all apply RAM or frameworks based on RAM. Office B has created their own guidelines, which is their individual interpretation of RAM. The guidelines contain paragraphs from RAM as well as other unit-specific recommendations. Office C only uses
RAM as guidelines and Office A is using RAM combined with Financial Guidelines, which has been established by the company in order to increase understanding about POC. According to RAM, all units should apply POC for projects reaching over one year.

5.1.4 Percentage of completion
The three offices use similar Excel-documents for planning, reviewing and recognizing revenue for projects. Since the documentation is used for both financial and management accounting, it is important that the progress can be projected in a way valid from both legal and managerial aspects. The documents all consists of defined milestones, dates for completion and progress made. The main differences of the Excel-documents are the arrangements of columns and the visual presentation of the models. Actual content is alike, especially the documents used by Office A and Office C.

Office C can be considered to have the most complete model since it presents an overview of both the dates of achievement, what category the milestone belongs to, current progress for the project, required documents, and who is responsible. Their document shows the information needed to review and assess the progress of projects. Office A has a similar model to the one used in Office C. The main difference is that Office A uses two sheets to enter their information, where Office C only uses one. This can be considered to be more efficient and makes the model easier to grasp. Office B manages almost all the information regarding the progress in their financial system, resulting in a less comprehensive Excel-document. According to the offices, the models are important factors when managing and understanding projects. It is therefore important that the models are fairly standardized so that employees, regardless from which office, can get familiarized with projects originating from other units. By doing so, the ability to share, train and recruit personnel will be facilitated.
When developing models, all offices use the recommendations in RAM as a foundation. This could be considered the reason to why the models are similar and consists of the same content. Each office seems to be very pleased with their own models, even though some can see the need for improvement. It is questionable if this awareness is because of inferior models, or lack of understanding for the procedures. The offices also agree that exactly the same model cannot be used for all offices because of the major differences in their projects.

When applying revenue recognition, the contract value should be considered to be the sale value. All offices use this value when recognizing revenue and calculating the degree of completion. They also explain the importance about treating revenue and customer payments separately. According to the realization principle, revenue should be recognized when the sale is made. When applying POC, this principle is to be ignored and revenue should be accounted for at other crucial moments, in the company represented by milestones. Office A and Office C argues that it is favourable to create milestones that occur simultaneously as payment, in order to create a natural documentation of progress. If, for example, the contract states that payment will be received when production has started, the receipt for this payment will contribute as milestone verification. External documents are preferred since these generate a higher reliability in the accounting.

5.1.5 Determining milestones
When determining the milestones there are rules regarding who is responsible for deciding the milestones. However, it is implied for all offices that it is the responsibility of the Project Controller to determine and validate the proposed milestones. The offices agree that the milestones should match the dates set according the ones determined in the initial contract. This is to ease the gathering of external documents, proving that milestones are achieved. According to the Financial Guidelines, the Project Controller arranges a
preliminary list of milestones together with the Project Manager. When the list is established, it needs to be validated by a superior department. In office C, validation of milestones are done by global headquarter. In office B, the validation is made by a superior unit within the division. The same approach applies for Office A, but who is responsible for the validation depends on the size of the project. According to the theories regarding decentralization, units possess greater understanding about their processes than headquarter, and are able to make faster and more accurate decisions. It can therefore be questioned if decisions are to be made by central administration, since the information about processes and milestones probably is higher within the units. By decentralizing decision making in the company, the validation process will become less time consuming, but the central administration is likely to lose control over the processes of the units.

All offices share the same recommendations regarding the percentage rate of their milestones. Since the products produced by the units differ in type and value, the procedures of determining size of the milestones also differ. This has been solved differently within each unit. For example, Office B develops new documents called VLS for each specific project, based on RAM. The office has decided to depart from some of the rules described in RAM. For example, they do not follow the rule of making each milestone less than 10% of the total cost. This is because their projects differ compared to the other two offices’. Since Office B performs service related work, the cost development is different from the others’. The service work has to be executed in a relatively short time span in order to allow the customers to use maximum run time for their machines. Because the work has to be executed in such short time and are associated with relatively high costs, the milestones must be allowed to exceed 10%. These milestones contribute with the most of the costs, and would not show a true and fair view of the project if they did not. Office A describes certain equipment delivered to site as a
major milestone. The equipment is costly, but does not represent any physical progress in the project. Therefore, it can be argue that these milestones are not contributing to any real project progress.

There is mutual concern to how milestones are to be defined. When putting the milestones into word, all offices agree it is important to make the definitions easy to understand and define them as consistent as possible. This is in order to reduce confusion when accounting for them. RAM describes that a milestone has to be easily identified when put into accounting. To identify a milestone it is therefore important that the definition can be understood by all employees.

5.1.6 Achieving milestones

No revenue is to be recognized until documentation has been collected proving the milestone to be achieved. This is in accordance with the precautionary principle, which describes the need for verification before putting revenue into the accounting. There are no existing rules concerning what documents are required when proving milestone achievement. According to RAM, both internal and external documents are acceptable for proving milestone achievement, but these documents are required to not be based on self-interest. Office A prefers external documents but have no directives saying it is a necessity. Office B has recommendations saying that as many documents as possible are to be external, while Office C requires one third of the documents to be external. They all argue that too much internal evidence would increase the risk for self-promoting accounting. Office A considers this to be one of their major problems and believes it could be solved by better defined milestones. These should be set to connect with naturally arisen evidence. As described, only Office C has a database intended for documents regarding the achievements of milestones. The other two offices have none and both consider this as a problem, because it sometimes can be hard to find needed documents.
Sometime problems occur when milestones have been poorly defined, leading to milestones hard to fulfil. When the definition for milestone achievement is not interpreted the same way, employees have problems to decide if it can be accounted for or not. There are no stated rules for what to do when this happens, and the offices sometime find it hard to know who to contact for support.

5.2 Problem formulation 2

What factors should be considered before implementing a standardized method for Percentage of Completion within the company?

When developing mutual standards and recommendations within the company, it is important to consider factors regarding standardization, decentralization, and frameworks.

5.2.1 Standardization

When implementing standardization regarding POC, there are several factors that need to be considered by the company. As mentioned by Ungan (2006a), Jang and Lee (1998), Ross et al. (2006), and Anthony and Govindarajan (2007), both advantages and disadvantages will affect the company when implementing standardized procedures. It can be considered important for the company to evaluate the need for these advantages and decide whether the benefits exceed the drawbacks. This is the first step in the implementation process described under 5.3.1 Identifying the need for standardization within the company. Because standardization of POC is in need for detailed process documentation it is important for the company not to rush the process and make sure it gets properly done since it is an expensive process. Rushing can result in inferior documentation which in turn can be considered to increase the costs even further or even force it to be revised. Since Ungan (2006a) describes standardization to be an upward-sloping trend, and can be
considered to be an important factor for the company in today’s business climate.

5.2.2 Decentralization
One of the benefits with decentralized organisations is that the decisions can be made in the concerned unit and enhance the quality of decisions. Standardization of the company’s POC processes will decrease the degree of decentralization, which in turn will move the decision making out of the units, and leave it to superior units. This cannot be considered to have any significant impact on the company since it is hierarchic and key decisions are already made by superior divisions. The negative effect of standardization can therefore be seen as limited. Still, there are factors that must be taken into consideration. Since the projects are diverse, the standardization of POC might limit the units’ possibilities to adapt accordingly. The company can therefore be considered to be in need for some level of decentralization even though it inhibits the purpose of standardization.

5.2.3 Regulations
Since the company is obligated to apply the IFRS-recommendations in their accounting, the recommendations have to be considered when implementing a standardized method for POC. CC is not to be used in accordance with IFRS, and POC is the only alternative for the company. According to RAM, POC should be used when projects reach over one year, and milestones should be used to decide when revenue is to be recognized. The size of the milestones is determined by costs, which is explained by Smith (2009) as one of the methods for calculating the degree of completion. The other method is to use physical degree of completion measurements. It can be argued that the milestones are measured by physical degree of completion, but since size of the milestones depends on costs, it is clear that the company uses cost-based degree of completion when applying POC.
Problems could arise when costs do not represent a true and fair view of projects, which can be considered to be one disadvantage when using costs as measurement for calculating the degree of completion. However, since the offices’ projects differ it could be hard to create physical milestones to apply on all offices. Since POC is a part of the company’s planning system, it can be argued that using cost to determine the degree of completion is highly suitable. This because it facilitates the planning of the company’s expenses, and provides a better overview of the business development.

5.3 Problem formulation 3

*What would be a functioning approach for implementing standardization within the company?*

When standardizing POC within the company, an approach has to be chosen. It has been discovered that a functional approach is done in three major steps recognized as identifying, determining and implementing.

5.3.1 Identifying the need for standardization within the company

The company has to decide whether the advantages of standardization exceed the disadvantages in order to determine if the implementation is suitable for the company. As all offices agree that innovation already is limited by company regulations, further standardization will not have an impact regarding this matter. They also agree that decentralization is a necessity because of the variety of products and that the company operates globally. Klugman (1994) argues that decentralization may have negative impact on the economy of scale. Since the company produces highly differentiated products, it can be argued that a decentralized organisation is needed in order to achieve proper management control.

One of the advantages of standardization presented by Jang and Lee (1998) is increased efficiency in simple, repetitive tasks. Since revenue recognition
does not include tasks that can be considered to be simple and repetitive, it will not affect the efficiency. Neither will the efficiency in revenue recognition improve since milestones still need to be validated by headquarter. According to Office A, Office B, and Office C, a centralized organisation is not an alternative and it is therefore more important to highlight the advantages. When implementing standardization, the company will be able to compare its offices, which otherwise is difficult according to Anthony and Govindarajan (2007). Standardization can be considered to be highly suitable for the company since centralization is not an option and standardization will therefore entail major advantages.

5.3.2 Determining the strategy for standardization within the company

When implementing standardized procedures within a company, Ross et al. (2006) argues that one first has to investigate whether the company is inquiring for standardization or integration in order to detect a suitable implementing model. To analyse this, the company has to answer the two questions presented in 3.1 Determining strategy for the implementation. The questions are: “To what extent is the successful completion of one business unit’s transactions dependent on the availability, accuracy, and timeliness of the business units’ data?”\(^3\), and “To what extent does the company benefit by having business units run their operations in the same way?”\(^4\). It is mainly to the factors in the first question that the company can be considered to be in need of, because they at present are not able to share data between units. The second question answers the need for standardized production processes, for which the company already has well-functioning processes. By these answers the company positions itself in the top left corner of the figure 3.1 Standardization versus integration. This corner is called the Coordination

\(^3\) Ross et a., 2006, p. 30

\(^4\) Ibid
operating model and describes what approach the company is to take when standardizing, in order to achieve its demands. The operating model is described to be suitable for organisation with unique value adding operation, which does not allow standardized production. Instead, the company requests the ability to share data between units, and offer service in order to create customer-value.

When the company’s request for standardization and integration is decided, one has to determine the appropriate approach for the implementation. To enable standardization the company needs to establish an archetype process. According to Münsterman and Wietzel (2008), this can be done by creating a completely new one, or by identify the best-in-class of existing ones. Since the company has well-working procedures they should base their models on their already existing ones. They should either use the best set of procedures created by a unit or single out the best, depending on time and costs that is acceptable. When an archetype process has been established the company needs to adapt all units’ processes to match this one. To enable this, the process is to be put into words and all steps in the procedures has to be described in detail.

5.3.3 Process documentation for standardization within the company
According to Polanyi (1966), knowledge is mainly tacit and can be hard to gather. The therefore company needs to carefully study the processes when being executed. Ungan (2006b) explains that if only interviewing the personnel, there is a risk that knowledge is lost. Ungan (2006a) assert process documentation as the main problem with implementing a standardized process. It is therefore important that the company is doing this right and not expedite it. Kogut and Zander (1992) describes know-how and information as two types of knowledge that has to be documented. Know-how is the knowledge about how something is supposed to be done, and information as facts about what is included in the process. In the company the know-how
can be considered to be instructions about how the personnel should execute various tasks. Information can be considered as the facts collected in the software about what projects consist of, and in which order they should be executed. Both the know-how about how procedures should be executed and the information found in the software have to be thoroughly recorded into the process documentation, so that disorientation is eliminated. Rohleder and Silver (1997) explains that some companies use process documentation as a tool for detecting non-value adding activities. This benefit will be raised in the company, even though the main purpose with the documentation is to standardize the procedures.

Ungan (2006b) describes a model for documenting, which is to be used when putting processes into words. The first step in the model is to decide which process to document. The company has decided this process to be the one regarding POC, which mainly treats the process of determining milestones. The second step is to state the objectives with the standardization in order to make sure that everyone involved in the documentation has the same objectives. The intention of the standardization is for all the units within the company to get an understanding for each office’s procedures, so that employees can be shared without additional training.

The third step in the model is to determine the level of detail. The theory presented on the subject provides different views regarding the importance of details in process documentations. Symons and Jacobs (1997) and Münstemann and Wietzel (2008) says that documents should be detailed and broken down into smaller steps, while Babicz (2000) and Dichter (1994) claims that it is more important for the documentation to be short and clear. Janzen (1991) and Ungan (2006b) argues that an ultimate level common for all projects cannot be identified, and Nesbitt (1993) declares that it has to be sought specifically for each project. The company should therefore evaluate the options and find a level of detail that is suitable for their needs. It can be
argued that, since the company’s purpose of the documentation is to raise awareness about other units’ processes, a high level of detail should be identified so that all essential knowledge is covered.

The fourth step is determining if to use a single interviewer or a team. It is explained that a team results in great detailed documentation. This is because a team is more suitable when developing process documentations for large and complex activities, such as the ones found within the company, and should therefore be chosen. When documenting the archetype process, the team is supposed to document the actions of the ones performing it. Since most knowledge is tacit, it is up to the team to interpret and record the actions being seen as discussed by Polanyi (1966).

In the fifth step, the team is supposed to define the reason for why the process is being examined. The definition should tell what the process aims to achieve and who is affected by it. For example the process for determining milestones within the company is executed in order to help milestone achievement and will have an effect on both accountants when accounting as well as controllers when following up on projects. These types of definitions are to be executed for each procedure, which is supposed to be documented within the company.

In the sixth step the company needs to decide which measures are to be chosen when evaluating performance regarding the procedures being documented. There are two sets of measures to choose from; effectiveness, efficiency and adaptability, and; cycle time, cost and quality. Effectiveness, efficiency and adaptability projects how easily the process can be implemented. Cycle time, cost and quality can be used in all processes. The measurements that can be considered to be more appropriate for the company are effectiveness, efficiency, and adaptability since the second step can be considered to be more suitable for producing companies.
In the seventh and final step, Ungan (2006b) describes how the knowledge is to be documented. When documenting the actions in the archetype process, it is important that actions are being documented as they are being performed and not as they are supposed to be carried out. Since a lot of knowledge is tacit, it can be hard to explain. When the company is documenting the archetype process, continuous communication and interactions with the practitioner are needed for enabling the actual actions to be captured. The interviewers may have to develop a mutual language with the interviewee in order to comprehend all knowledge. For the company, this means that they have to evaluate the software being used, and determine whether all the functions are used as they are described. They also need to make detailed descriptions of each step in the procedures to ensure, the actions are being accurately interpreted by other users.
6. Conclusions

This chapter intends to answer our formulated purpose and give recommendations for the company to use in their standardization process. The purpose of this study is to compare the units within the company in order to identify differences and important factors when considering standardization. The study also intends to contribute to the knowledge concerning standardization by identifying essential factors for a successful implementation, based on how the company operates at present. This intends to result in recommendations for the company to can use when standardizing their processes regarding POC. We will give recommendations by identifying the most suitable and efficient processes among the already existing ones.

6.1 Conclusions and recommendations

A problem for the company is the differences in attitude towards standardization. We believe that the implementation will be more difficult for the company if mutual demand for standardization does not exist. However, the difference in attitude should not affect the decision regarding to whether standardization should be implemented or not. It is therefore important for the company to communicate the purpose and advantages to the units in order to increase the goal congruence and decrease political tension.

As of today, there are no common rules regarding to how documents should be stored. We believe that proper storage is important for the company in order to decrease the uncertainty concerning to the question of where to find essential documents. We argue that this could be solved by creating a standardized process for where to store these documents. The only office with well-functioning standards is Office C, and our recommendation is to use this standard in all offices.
One of the main differences between the models for POC used by offices is the design and layout of the Excel-documents used for revenue recognition. We believe that the design and layout of the models should be equal, since it would facilitate for personnel when working for different offices. Since it is difficult to develop an identical model to use, a mutual template should be used from which all offices can develop their own specific model. Our recommendation is that Office C’s model should be used as a foundation when developing the mutual template, because it is the one considered being most complete. We also believe that rules about further development should be established in order to decrease the risk for the models to be too diverse.

There is a difference among the offices concerning milestone validation. In Office A, milestones of smaller projects are validated within the unit. We believe this to be an effective approach for the company, since the units possess greater knowledge about their processes. This solution will also let superior departments focus on the long-term goals of the company. Our recommendation is therefore that the process of validation should be kept within the units. This advocates keeping a degree of decentralization within the company.

The offices have different regulations regarding internal and external verifications of milestones. We believe that Office B has the best approach concerning the verification of milestones, but that the unit needs to make sure they are followed. Our recommendation is that project planning should be made in consideration of whether external verifications could be gathered or not. External documents should be essential within the offices, and if internal is to be used it should be clearly motivated and validated by the mutual economic department.

Standardization contradicts the purpose of decentralization, and it is therefore questionable whether it is suitable or not. However, we believe that the benefits of standardization will exceed the drawbacks of decentralization.
within the company, and that standardization should be implemented. When standardizing, the company has to carefully execute the implementation process. Our recommendation for the company is to develop proper process documentation by following the course of actions described in 3.4.2 Documentation and 5.3.3 Process documentation for standardization within the company. We believe that mutual flow charts or process mapping will make the standardized model easier to implement among the units and increase the understanding about involved processes.

It is important that the new model uses RAM as a reference in order to apply the correct laws and regulations, as well as corporate guidelines. Since RAM is based on these, we are of the opinion that correct regulations and guidelines are taken into consideration.

<table>
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<tr>
<th>Factors</th>
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<th>Office B</th>
<th>Office C</th>
<th>Comments</th>
</tr>
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<td>Positive</td>
<td>Positive</td>
<td>Negative</td>
<td>There is no mutual understanding regarding the effects of standardization</td>
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<tr>
<td>Resources for process documentation</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Office A is the only office with the resources for developing flowcharts or process mapping</td>
</tr>
<tr>
<td>Adequate storage of documents</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Office C is the only office with sufficient storage of documents</td>
</tr>
<tr>
<td>Sufficient POC model</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>The model used in Office C should be used when developing a mutual template</td>
</tr>
<tr>
<td>Validation of all milestones within the unit</td>
<td>Depends on the size of project</td>
<td>No</td>
<td>No</td>
<td>There is no mutual recommendations for the validation process of milestones</td>
</tr>
<tr>
<td>Requirements for external verification</td>
<td>No</td>
<td>As much as possible</td>
<td>At least one third</td>
<td>In order to implement standardized process, the company must decide a mutual rule</td>
</tr>
</tbody>
</table>

Figure 5. Summary of essential factors
6.2 Further research

This essay studied a complex implementation process in a large company. Due to the complexity in both the situation and company, together with the company’s request to be anonymous, the reliability of the essay may have been reduced. However, the interviews have been made with employees, considered to be the ones with the best knowledge about the subject, which in turn can be argued to have raised the reliability. To increase the reliability even more, we could have made more interviews based on a larger sample, or let the interviewees validate the information gathered.

The initial intention was to visit the offices, but due to lack of disposable time in Office B and Office C, this was not feasible. These visits could have contributed to a better understanding regarding the processes by being able to interpret and get a feel for the climate in each office.

To further research the contradiction between standardization and decentralisation, one could study the desired level of standardization in other processes. The researcher could seek to identify other essential factors, effected by and effecting standardization. We believe that other factors like culture and management style could have an impact on the desired level of standardization. It would be interesting to study the effects of the current implementation within the company. Since the study explained problems that could occur when implementing standardized models, further studies could also be made in order to analyse whether they occurred within the company or not. This would show the level of reliability, as the study would follow up on the implementation. The study could examine if this essay brought the desired effects for the company in their implementation process.
References

Literature


**Interviews**

Head of Project Control. Office A. Interview. 2012-03-26

Head of Project Control. Office A. Interview. 2012-04-13

Head of Project Control. Office A. Interview. 2012-04-27

Head of Project Control, Office C. Interview. 2012-04-30

Team Leader of Project Control. Office B. Interview. 2012-05-04

**Electronic**


Head of Project Control, Office C. Mail 2012-05-14

**Internal documents**


RAM. Internal Document. Acquired: 2012-03-27
Appendix

1. Interview guide

What are your thoughts about decentralization?

1. How do you think decentralization affects your unit regarding innovation?
2. How do you think standardization will affect your independence?
3. Do you consider the independence within the company?
   → Do you see independence as a necessity? Why?

What is your attitude towards the introduction of standardized recommendations and models?

1. How do you consider standardization to affect your unit?
   → How could standardization affect your unit?
2. Tell us how you commit to rules or recommendations set by headquarters about how procedures should be carried out in your unit?
3. Are there any standardized processes that you have to follow at present, or are there room for your department to be innovative? How?

Tell us about how the process documentation is executed at your department?

1. What do you think of the documentation regarding the projects? (Is it enough, uncertain or well-established?)
2. Are there any rules regarding what documentations you have to fill in while doing certain operations? Describe them.
3. Do you use tools to ease the documentation regarding operation processes? (Flow Charts or Process Mapping)
   → If not, does your unit have access to the necessary assets to develop these types of tools?

How does the unit apply percentage of completion at present?

1. Describe the model used for operating the projects?
2. Do you use milestones when accounting for the projects?
How do you demonstrate that a milestone has been reached?

What decides the milestones? (Cost of component or physical measurements)

3. How do you define a milestone? (100% complete or major components complete?)

4. Do you know the differences in how other units have designed their models?

5. What do you think about your unit’s approach to POC?

→How do you think it could be done better?

Do you have any frameworks set by headquarters when applying POC?

1. Tell us about the framework set by headquarters and how you use it.

→Do you follow the framework, or do you customize it to be suitable for each project?

→What is your opinions on the framework? (Easy to use and understand, or too complicated?)

2. Do you apply IASB-recommendations in your accounting?

3. How often do you evaluate your projects?

Miscellaneous

1. Do you have any instructions if unforeseen problem occurs? (Missing payments, legal problems, need for departing from recommendations etc.)

2. Do you have contact with the other Swedish offices regarding how projects should be operated?