CHALMERS
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The Business Value of Process Management

- Potentials, risks, and critical adoption aspects

Master of Science Thesis in the Master's Degree Programme, Quality and Operations Management

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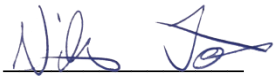

Niklas Jonsson

ABSTRACT

In this thesis, a Swedish manufacturing company is investigated in terms of what business value an adoption of process management could create. It also considers what critical aspects that exist in creating a successful adoption. In addition to a qualitative single case study and a literature study, a benchmarking study is used to gain more practical insights from an organisation that already have adopted process management.

The case company is functionally orientated, and has previously been much focused on product innovation. The reasons for the past success are believed to be; good prioritisation of costs, innovativeness, and agility. There has been a recent shift where more industrial customers are being targeted, and thus the demands from customers are changing. Connected with this shift, several problems have started to become more present. For example, customers complain that the company is slow at responding to problems, sales personnel argue that they do not have enough customer face-time, and there is a lack of understanding of the total costs involved in e.g. solving a quality issue.

Process management is in theory described as a structured approach to manage and improve the processes of an organisation, and is a mean to achieve a higher degree of process orientation. Being process-orientated could provide benefits such as create an aligned customer focus, enhance the capabilities to react on market changes, increase transparency, and provide standardisation. However, there are also risks related to process management. For example, going too detailed in the process mapping can hamper the creative capabilities in the organisation, and process management could create a complex authority structure where power struggles occur.

Analysing the case company's situation, by using theory and information from the benchmarking study, the business value a process management adoption could create include; increased time spent on sales-generating activities, a common focus on value-adding activities for the customer, reduction of waste and costs of poor quality, and end-to-end facts to base decisions on.

In order to control, manage, and make the adoption successful some critical aspects were identified; a holistic governance structure should be established, when a top-down approach is used it should be combined with local adaptation, preparations in terms of time and education are needed, focus should be on top management commitment and employee engagement, and the measurements established needs to be linked with the business strategy.

Keywords: Process management, process orientation, potentials, risks, adoption, critical aspects, business value.

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1 INTRODUCTION

This chapter presents the background to the research area and the purpose of the research. It further states the delimitations of the thesis, and presents its disposition.

1.1 Background

Today, the business climate is becoming fiercer, with global competition and shorter product and technology life cycles (Bell, 2005; Searle, 2011b). These factors require organisations to react faster, to be more flexible, and to better listen to customers and better anticipate changes in their needs (DeToro & McCabe, 1997; Kennerfalk & Klefsjö, 1995). To meet changing customer demands, *quality management* emphasises the importance of working with processes (Bergman & Klefsjö, 2010; Dean & Bowen, 1994).

Process orientation is part of the quality management field and its main idea is to structure the work in the organisation around its core processes, rather than around its functions (Forsberg et al., 1999; Kohlbacher & Reijers, 2013). A process can be referred to as "an activity or a set of orderly linked activities transforming inputs to output for customers in a repetitive flow" (Rentzhog, 1996, p. 29). Chung (1994) states that by having a process-orientated organisation with an end-to-end process-focus, the risk of creating departmental boundaries and sub-optimisations is decreased, and Gemmel et al. (2008) and Kohlbacher (2009) state that it enables a flatter organisation with more flexible and transparent processes.

Process management can be defined as "a customer-focused approach to the systematic management, measurement and improvement of all company processes through cross-functional teamwork and employee empowerment" (Lee & Dale, 1998, p. 217). The interest for using process management to manage businesses has increased greatly during recent years, but many companies struggle with the adoption and with demonstrating the benefits of their process management initiative (Franz & Kirchmer, 2012: Lee & Dale, 1998; Olding, 2013; Pritchard & Armistead, 1999).

Dixon (2011; 2012) also highlights that a common challenge for process management initiatives is to demonstrate the strategic and business value achieved. Benner and Tushman (2003) further argue that the actual benefits achieved with process management are less clear than theory suggests. Business value, in this context, can be related to; the return on investment, the actual process improvement, and to how much impact the initiative has had on the company's strategic business outcomes (Dixon, 2011; Dixon & Searle, 2013).

At the same time as process management initiatives often struggle with demonstrating achieved business value, Lee and Dale (1998) state that there is no coordinated way to adopt process management. For example, they argue that there are discrepancies among authors whether a top-down or bottom-up approach should be used. Pritchard and Armistead (1999) state that process management needs to be adapted to the company setting, which is further strengthened by Franz and Kirchmer (2012) who state the risk of creating a poorly fitting

process management structure, leading to inflexible processes. In addition, Škrinjar & Trkman (2013) emphasise that much of the literature within process management is general and lacks concrete recommendations for a successful adoption.

Since process management outcomes are hard to measure and there is a lack of best practice adoption strategies, it is hard for companies to approach process management in a confident way. A Swedish manufacturing company is currently preparing to enhance its process orientation through the adoption of process management, but the company is not confident in how such an adoption would affect the company or in how it should be adopted. In order to try to answer these questions pre-studies are currently carried out. This Master's thesis is part of these pre-studies, and considering the above described complex nature of adopting process management the thesis could provide a concretisation of how an adoption actually could create value for the company, in terms of reduced costs, increased quality, increased sales volumes, and return on such an investment. It could also provide insights into what critical aspects are connected with successful adoptions.

1.2 Purpose

The purpose of this thesis is to provide insights into what business value can be created by adopting process management in a manufacturing company, and to identify critical aspects to consider in such an adoption.

The purpose will be fulfilled by assessing the current degree of process orientation in a manufacturing company, and connecting it to the potentials and risks associated with adopting and using process management. The purpose has been divided into four research questions. The first two questions cover what common potentials and risks are associated with adopting process management. The third question connects the first two questions and covers what business value can be created. The last question addresses how a successful process management adoption can be created.

RQ1: What are common potentials of adopting process management?

RQ2: What are common risks with adopting process management?

RQ3: What business value can be created when adopting process management in a manufacturing company?

RQ4: How should process management be adopted, in order to become successful?

1.3 Delimitations

The research is based on a case study at a manufacturing company. The case study is carried out on a global scale, covering the main processes and functions. Thus, the thesis does not focus on sub-processes.

Changing IT systems in a company is often costly and needs thorough investigation on its own. Therefore, IT has not been a focus in this thesis.

Apart from identifying some critical adoption aspects, the thesis does not cover the adoption of process management.

The case company is facing a process management directive from its company group. The company group is using Hammer's (2007) process and enterprise maturity model (PEMM) in their process management work. Hence, no other maturity model than Hammer's PEMM has been considered or used in this thesis.

1.4 Report Outline

Chapter 1-2: An introduction to the thesis and its research field is given, followed by a chapter describing the methodology used to conduct the Master's thesis.

Chapter 3-5: A theoretical framework focused on organisational structures and different aspects of process management is presented. The theory is then supplemented by empirical data from the case company study and from a benchmarking study.

Chapter 6: Data from the case and benchmarking studies is analysed with data from the theoretical framework. The analysis covers the current process maturity at the case company and the potentials, risks and critical aspects in adopting process management.

Chapter 7-8: The data from the analysis is discussed and connected with the purpose in order to create value to the research field, and recommendations for future research are provided. Then a discussion regarding what implications the research has for practice is held. Lastly the research questions are answered in a concluding chapter, together with recommendations for the case company.

2 METHODOLOGY

This chapter describes how the research was conducted. The general research approach is described, followed by information about data collection and data analysis. Then a discussion of the quality and reliability of the research is held.

2.1 Research Strategy and Design

It is important to choose a research strategy that is suitable for the study (Yin, 2003). According to Yin (2003, pp. 5 & 7) there are three factors deciding what research strategy to use for a study; *the type of research question*, *the extent of control over behavioural events*, and *degree of focus on contemporary as opposed to historical events*. By answering these three factors it is possible to identify the most appropriate research strategy. Yin (2003) defines five main research strategies; *history*, *archival analysis*, *case study*, *survey*, and *experiment*.

One of the most critical steps in a research study is to define the research questions correctly (Yin, 2003). The research design aims to create a framework for data collection and data analysis (Bryman & Bell, 2011). There are different designs, e.g. case study and longitudinal design, and the most suitable design is depending on the specific research. Ghauri and Grønhaug (2010) argue that a case study approach is especially useful when the investigated phenomenon is troublesome to study from the outside.

The thesis uses a case study design. One specific organisation was studied in-depth from *a single organisation* approach, which means that the thesis investigates the organisation as a whole and is not restricted to a certain location or event. The first step was to find a topic which was desirable to investigate for the case company. After having identified the topic, discussions with the supervisor at Chalmers and representatives at the case company were held, where the scope and delimitations of the study were clarified. Finally, a meeting with the supervisor from Chalmers and representatives from the company were carried out in order to define and align the requirements from both parties.

A research strategy can be categorised into qualitative and quantitative research (Ghauri & Grønhaug, 2010). A quantitative research is more structured and focuses on the use of measurements and statistical analysis of data, whereas qualitative research is less structured and focuses on investigating elements relatively unknown. For instance, while a quantitative study is more result- and number-orientated, a qualitative study is more process- and word-orientated (Bryman & Bell, 2011). It is also possible to have a mix between quantitative and qualitative research in a study (Ghauri & Grønhaug, 2010; Bryman & Bell, 2011). However, it should be highlighted that which method is most suitable to use will depend on the type of study (Jankowicz, 1991).

A qualitative study is suitable when investigating organisations, groups and individuals in-depth (Strauss & Corbin, 1990 in Ghauri & Grønhaug, 2010). Some typical qualitative

techniques to use are conversations and semi-structured interviews (Ghauri & Grønhaug, 2010). To conduct a qualitative study it is important that the researcher knows how to avoid bias, to think abstractly, and to obtain credible information. In order to obtain information about the current state, which is unknown, and investigate potential benefits and drawbacks of process management an in-depth study of the organisation is necessary. Hence, mainly qualitative methods, like semi-structured interviews, will be used to carry out the study.

Research strategies can be divided into three categories; *exploratory research, explanatory research* and *descriptive research* (Yin, 2003). According to Ghauri and Grønhaug (2010) an exploratory study is usually connected to qualitative research, a view that is partly shared by Yin (2003) who highlights the difficulties of distinguishing different strategies. An exploratory study is usually preferable when the research problem is unstructured and badly understood, whereas *explanatory* and *descriptive research,* also referred to as *casual research*, are more appropriate when the problem is structured and clear (Ghauri & Grønhaug, 2010). This thesis is investigating areas where the problems and purpose of the investigation are not clear and entirely understood. Therefore, the exploratory research strategy was seen as the most appropriate research strategy to use.

Deductive research means that the research is testing whether a theory can be rejected or not (Bryman & Bell, 2011). *Inductive research*, on the other hand, is a way of generating theory based on empirical research. Quantitative research is usually having a deductive approach and qualitative research more of an inductive research strategy. However, Magnani (2001) argue that there is a third approach to consider as well, the *abductive research*. In abductive research you add information from different sources and contexts to come to a conclusion explaining a phenomenon or observation. The research of this report is abductive, since new sources have been added and areas to investigate further have changed continuously throughout the study.

One common abductive approach to use in research is *systematic combining* (Dubois & Gadde, 2002). This technique is used to develop the theoretical framework, empirical data and analysis simultaneously. The evolvement is achieved by frequently "jumping" between the theoretical and the empirical world. By doing so, the theoretical framework is regularly updated and aligned with the empirical study. A benefit of this approach is that it is useful to come up with new theories. When dealing with systematic combining the approach is divided into two processes; matching *theory and reality* and handling *direction and redirection*. According to Dubois and Gadde (2002) there are four factors affecting these processes; *what is going on in reality, available theories, the case that gradually evolves,* and *the analytical framework.* A systematic approach was used, in order to keep the report aligned when changes in research direction and research areas were made. All parts of the report evolved simultaneously over time.

2.2 Literature Study

Aligned with what Bryman and Bell (2011) state about a literature review, the purpose of the literature study in this thesis was to get to know the existing theory within the field of

research. Moreover, the literature study helped to develop the research questions further and to reach a better fit between the purpose of the research and the method used.

The literature study was based upon books and academic articles found at the Chalmers Library as well as at the following databases; *Academic Journals, Books 24x7, Business Source Premier, CRCnetBASE, Directory of Open Access Journals, Ebrary, Emerald Insight, JSTOR, ProQuest, SAGE Publications*, and *ScienceDirect*. In addition to theoretical data, the case company demanded practical data. To gain more hands-on practical data, the report database Gartner was used. Gartner has a strong practical focus, and its reports are based on company interviews, experiences of the authors of the reports, in-depth company studies, and surveys.

The study started off with a broad study approach based on recommendations from the supervisor at Chalmers and from the authors' own experience. The recommendations provided useful literature related to quality management, process orientation, and process management. The broad study aimed to provide a holistic understanding of the research field and when that was achieved parts of the field were studied in more detail. The detailed study considered the research questions in more detail and used keywords including; *functional structure, matrix structure, organisational structure, process management, process measurement, process orientation, process-oriented structure,* and *quality management*. The keywords were used to search in the databases mentioned in the section above. In addition to using keywords *backward snowballing* was used. This means that books or articles referred to in a bibliography are studied (Jalali & Wohlin, 2012). Moreover, the research field's most referred to books and articles were identified using the *Scopus* and *Web of Science* databases, and then studied.

2.3 Data Collection

Before starting the data collection it is critical to judge what kind of data is necessary for the particular study (Ghauri & Grønhaug, 2010). Ghauri and Grønhaug (2010) argue that qualitative methods are effective when investigating organisations and groups since they are more flexible and could provide more in-depth data than quantitative methods. Yin (2003) highlights that the methods used in qualitative research are complementary and, hence, a mix of different methods is recommended to ensure the quality of the case study. Typical methods related to qualitative research are; observations, qualitative interviewing, focus groups, conversations and internal documents (Bryman & Bell, 2011). More information on the techniques used in this thesis will be presented in the succeeding sections.

In order to gather data for the research, primary data was collected and the methods used to collect the data were qualitative. The methods include; conversations, internal documentation, and interviews.

2.3.1 Conversations

Conversations were used to gain information in a less formal setting by talking to employees or relevant people in naturally occurring situations (Bryman & Bell, 2011). In this thesis the conversations were mainly in the form of short small-talks with people encountered around the coffee machine and in the lunch room. The procedure after every small-talk was to immediately summarise what was said during the talk. In total, about 15 small talks were carried out during the thesis. The small-talks and conversations mainly provided information about the employees' experience of miscommunications and common problems, for example by explaining how a certain issue reoccurred and created long email threads.

2.3.2 Internal documentation

Studying internal documentation is a useful strategy in case studies (Yin, 2003). Advantages of using documents are that they can provide stable and exact data, covering a long period of time. However, Yin (2003) states that it is important to remember that the documented data is not intended for the case study, thus the information can be biased. Therefore, documentation should mainly be used as a corroborate source of data (Yin, 2003). Examples of common documentation used are administrative documents and formal studies. In this thesis, the internal documents included; process maps, organisational structure charts, KPI documents, survey data, and sales management strategies.

2.3.3 Interviews

Interviews are an important source of information during qualitative case study research (Bryman & Bell, 2011; Kvale & Brinkmann, 2009; Yin, 2003). There are several types of face-to-face interview methods, and during this thesis the semi-structured interview method was of primary use. The method refers to the interviewer preparing a series of general questions intended to guide the conversation (Bryman & Bell, 2011; Ghauri & Grønhaug, 2010). It has the benefits of leading the interview, and it helps to cover what is intended. At the same time, it leaves room for both the interviewer and the interviewee to influence the content of the interview. The method of semi-structured interviews was chosen since the study is exploratory where the goal of the study was not clear at the beginning. Hence, the semi-structured interviews allowed the interviewers to pick up on information that was not known from before but could be relevant for the thesis. The questions were to some degree adapted to each interviewee, in order to bring the most out of every interview. Some of the more frequently asked questions include:

- "What does process orientation mean to you?"
- "In your opinion, what are the largest bottlenecks for carrying out work in your department?"
- "What potentials, and what risks, do you see with working process-orientated within your department?"
- "Do you see that the company has a need to change the way of working?"

Bryman and Bell (2011) state that using pre-written interview questions as a guide for an interview, is a good way to address the issues of *inter-* and *intra-interviewer variation*. If

inter- and intra-interviewer variation is not addressed it might lead to inconsistent interviewing and skewed results. The authors of the thesis agreed upon a common and structured approach to asking questions and taking notes. This concerned how and when to use the semi-structured questions, as well as how to take notes. The roles of asking questions and taking notes were alternated between the interviewers during each interview.

Information from interviews should always be treated as verbal reports since it is subject to issues such as bias, poor recall, and inaccurate articulation (Yin, 2003). There are several methods to decrease these issues, such as conducting an audio recording during the interview. This was determined not to be used during this thesis, partly because those issues are already reduced by always having two interviewers. In addition, audio recordings can make the interviewee less open during the interview and that transcribing an audio recording is a time-consuming task (Ghauri & Grønhaug, 2010).

There are several ethical issues connected with conducting interviews. Kvale and Brinkmann (2009) state that most of these issues derive from that the interviewer tries to expose details from the lives of others, and intends to publish these facts for others to see. This was addressed by being clear about the research purpose up-front of each interview, clarifying that no personal details more than the general work role of the interviewee would be published. The interviewee was also given the right not to respond to a question without stating a specific reason.

The selection of interviewees was primarily made together with the supervisor from the case company, which had the benefit of finding interviewees with relevant knowledge about the topic within a reasonable time. However, the supervisor's choice might have been subject to bias since his personal interest of the result of the interviews could have affected his selections. Kvale & Brinkmann (2009) state that pilot interviews can be beneficial in the beginning in order to get a general understanding and to test the questions. The first interviews in this thesis were decided to be conducted with persons from higher management in order to get this general perspective. In Table 1, an overview of the conducted interviews can be found. It shows each interviewee's work role, how many interviews were conducted with each role, and where the interviewee normally is located. The length of each interview was between one and two hours.

Table 1. *Location and organisational position of interviewees.*

Organisation member	No. of interviews	Location
Corporate management	3	Company group
Top management	9	Case company
Business office	2	Case company
Quality department	3	Case company
Production and delivery process	3	Case company
Sales process	3	Case company
Product development process	2	Case company
Aftermarket and support process	2	Case company
Benchmarking study	5	Benchmarking organisation
Total:	**32**	

2.3.4 Benchmarking study

A benchmarking study was carried out in order to gain best-practice knowledge of process management. The benchmarked company was chosen in agreement with the supervisor at the case company, e.g. since it would allow case company employees to relate to their own experience from hospitals.

The decision for what organisation to benchmark was based on the high degree of similarities between the benchmarked organisation and the studied case company. Similarities existed in terms of restricted budget for the adoption, a tradition of strong functions, and in the desired outcomes of the change. However, it is important to highlight some of the differences that exist between the case company and the benchmarking organisation. For example, the benchmarking organisation is governmentally funded and is not driven by profit, and is also only present in one region of Sweden. It further provides health care services, while the case company mainly is a manufacturer of physical products.

In order to carry out the benchmarking study, the authors visited the benchmarked company. During the visit, four interviews were held with key people from the benchmarked company's personnel. Three of the interviewees were situated at the site visited, while the fourth was situated at another site. Two of the interviewees had a supportive, managerial, and developing role in the process work, whereas the other two had the roles of process owner and process manager. Additionally, a telephone interview was held after the visit at the benchmarked company in order to quantify the benefits achieved at the benchmarked company group by working process-orientated.

2.4 Data Analysis

Qualitative research often generates large amounts of unstructured data, since it derives from interviews, conversations, and other data collection methods involving interpretation of the researcher (Bryman & Bell, 2011). Thus, there is no one way of approaching the data analysis, and what method for analysis is the most suitable varies.

Systematic combining has been used (Dubois & Gadde, 2002), meaning that the data collection and data analysis have been conducted in parallel. Bryman and Bell (2011) calls this an *iterative* approach and state that is has the advantage of adjusting the data collection to what is found important during the data analysis.

The hand-written notes from interviews were transferred to and stored in a searchable database together with the other data gathered. In order to make sense of the data, the method of *coding* was used. Coding is a common method to use in the beginning of qualitative data analysis (Bryman & Bell, 2011). During the coding the data was structured by first being broken down, and then sorted and merged into common categories. Bryman and Bell (2011) highlight the risk for data fragmentation during coding, referring to when the context of the data is lost. The aim here was to create a new category when data did not fit in a category, and thus not worrying about creating a large number of categories. Furthermore, being two persons doing and reviewing the coding, at the same time as keeping the original database alongside with the new categories, the risk for fragmentation was reduced.

After two months the authors had gained more knowledge and data of the subject, and a data clustering was carried out. Clustering of data is when the collected information is sorted into groups based on its similarities (Bryman and Bell, 2011). By doing the clustering, interesting areas to look deeper into was found. Theory matching these areas was then studied and the following interviews emphasised these areas. For example, areas such as the sales process, benefits of the current functional structure, and how to include the customer in the KPIs were identified as areas to investigate further.

To identify the current state of the case company the collected data was analysed by the authors together with the supervisor at the company, according to Hammer's (2007) maturity model. Each maturity category was discussed in relation to the collected data and led to a green, yellow, or red maturity score for each level from E-1 to E-4. As an example, if a statement was given a green score by the authors and a yellow score by the supervisor, the interpretation of the statement and reasoning behind the score were discussed and then a common scored was agreed upon.

Two sessions, inspired by the KJ method described by Scupin (1997), were held where the authors brainstormed upon the potentials and risks with process management. The sessions provided the authors with a structured approach to gathering and grouping the collected data, and enabled consensus to be reached. The sessions did not focus on interrelationships.

2.5 Research Limitations

The methods needed to ensure a high research quality will vary depending on the type of research, e.g. a quantitative research requires different means than a qualitative (Bryman & Bell, 2011; Yin, 2003). Bryman and Bell (2011, p.41) state that "the most prominent criteria for the evaluation of business and management research are reliability, replication, and validity". Therefore, this part of the thesis will be divided into these criteria together with a part on *criticism of sources*.

2.5.1 Reliability and replicability

Reliability mainly concerns the consistency of measures and how well the research and its results could be repeated by someone else (Bryman & Bell, 2011; Yin, 2003). In order to increase the reliability, emphasis should be put on minimising errors and biases in the data collection and analysis (Yin, 2003). Bryman and Bell (2011) divide reliability into *internal* and *external reliability*.

Internal reliability refers to when there are more than one person involved in observing or listening, and thus can reach a common consensus on the outcome (LeCompte & Goetz, 1982). This issue is reduced as research is conducted by two students simultaneously and by the research being conducted primarily within one organisation.

External reliability refers to the replicability of a study (LeCompte & Goetz, 1982). Replicability concerns to what extent a study can be replicated, achieving the same results (LeCompte & Goetz, 1982; Yin, 2003). While this is hard to achieve in this case study, considering the ever-changing social environment it is set in, the aim has been to increase the transferability of the experiences by keeping a detailed log and to use large sample sizes during the data collection.

2.5.2 Validity

Yin (2003) states that validity can be divided into three main parts. The first part of validity is *construct validity* referring to the operational measures used during the data collection and during the research composition (Ghauri & Grønhaug, 2010; Yin, 2003). This part is important to address during case study research since the researcher's subjectivity can impact the result to a large extent (Yin, 2003). In order to address this part, a triangulated research approach has been used during this thesis, where the literature study and interviews have been accompanied by e.g. conversations and internal documents. This reduces the risk of subjective influence on the result. To further reduce the risks of subjectivity and misunderstandings validation sessions with the case company supervisor and representatives from the quality department have been held. For example, the process maturity analysis conducted by using Hammer's maturity model was validated with employees from the case company.

The second part is *internal validity* and concerns the data analysis (Yin, 2003). By referring to the underlying cause-effect relationship of the result, this part is more important to address in experimental research (Bryman & Bell, 2011; Ghauri & Grønhaug, 2010; Yin, 2003). Though, case study research is affected by it in terms of how conclusions are drawn and how

well the theory matches what have been observed. For example, there could be an issue with using a benchmarking organisation directed at providing services within a single county, and comparing it with a manufacturing company producing and shipping products globally. To address such issues and reduce the risk for creating incorrect cause-effect relationships in the research, the authors have tried to keep a critical approach to the data, and have used a triangulation method.

The analysis of the maturity for adopting process management in the case company was carried out together with the supervisor at the case company in order to reduce the risks of misunderstandings and bias. First, both authors of this thesis and the supervisor judged the maturity level individually, and then each category was compared and discussed until consensus was reached.

The third part is *external validity* which refers to how generalisable the results are in terms of being used by different people, in other settings, and at different times (Bryman & Bell, 2011; Ghauri & Grønhaug, 2010). The quality of the same is much affected by how the people and organisational parts studied have been selected. While a quantitative study can use representative samples, a case study will be limited in this aspect if not carefully considered (Bryman & Bell, 2011; Yin, 2003). The relevant type of generalisability issue for this thesis is what Kvale and Brinkmann (2009) refer to as *analytic generalisability*. Since the research is made on a holistic level and considers general aspects of process management, it becomes less specific to the case company and its generalisability is considered to be quite high.

2.5.3 Criticism of sources

Since this research is carried out within the scope of a Master Thesis, the timeframe is limited. With a limited timeframe the data collection will be affected and this could especially mean that the time spent to study the broader literature field was insufficient in order to find generally unconnected literature relating to the same topic. What Bryman and Bell (2011) refers to as literature with *synthesized coherence*. The problem with the timeframe has been addressed by receiving support from supervisors familiar to the field of study, and by using backward snowballing.

Articles published by Gartner were used to gain more practical information. Gartner is a private research firm, which means it is in the interest of the company to make as much profit as possible. This could mean that articles published by Gartner are biased in order to gain more sales. Besides, most of the articles are based on experiences of the employees and on interviews with companies, which in turn could create bias. In addition, Gartner's focus is mainly on companies within the IT industry, which further adds limitation in terms of external validity.

Considering the fact that many of the interviewees were chosen by the supervisor at the case company, there is a risk that the supervisor's desired outcome of the thesis affected the choices of interviewees. However, some interviewees were chosen by the authors themselves, which reduces the risks for the supervisor's subjectivity influencing the result of the research.

The interviewees at the benchmarked company were chosen by the supervisor at Chalmers and one of the interviewed employees. All interviewees selected had central roles in the process development work and thus subjectivity could have affected the collected information.

3 THEORETICAL FRAMEWORK

This chapter introduces the reader to the research field. It starts with a section that introduces the process structure, process management, and how process management can lead to increased quality. It also addresses how a process management adoption could be approached, and how organisational change can be fostered.

3.1 Organisational Structures and Process Management

The main idea behind creating an organisation is to reach common goals by using less resources (Kennerfalk & Klefsjö, 1995). Depending on the type of work carried out in the organisation, different levels of specialisation will be required and it can be achieved by co-locating employees with similar skills. There are several different organisational structures each favouring its specific company setting (Stanford, 2007). A centralised structure as the function-orientated structure has advantages including specialisation and economies of scale, while a decentralised structure as the process-orientated structure enables a company to be quick in adapting to changes in the company environment (Kennerfalk & Klefsjö, 1995; Legerer et al., 2009).

3.1.1 Process-focused structures

In a process-structured organisation, work is carried out horizontally with a focus on the customer, whereas in a functional structured organisation work is carried out in functions with focus on specialisation and deep knowledge (Kennerfalk & Klefsjö, 1995). In Table 2, the characteristics of the pure functional structure are compared with characteristics of the pure process structure.

Table 2. *Characteristics of functional and process structures. Based on literature from Stanford (2007) and Kennerfalk and Klefsjö (1995).*

Category	Functional structure	Process structure
Focus	Vertical focus emphasising functions, specialisation, and work activity.	Horizontal focus emphasising core processes of the business.
Organisation	Hierarchic. Divided in units and co-located based on skills and work activity.	Flat. Divided in units along the processes.
Communication	Vertical. Customer contact mainly through sales and marketing.	Horizontal. Active communication with supplier and customer.
Goals	To reach business goals by fulfilling functional goals.	Cross-functional objectives to fulfil corporate goals.
When is the structure suitable	In environments with stable markets, well-known customer requirements, and a single standardised product line.	In environments with well-defined business processes, long process cycle times, complex products and low tolerance on working capital.
The view on change	View change as a threat, aim is to keep status quo.	View change as needed to better meet common goals.

DeToro and McCabe (1997) state that in a function-focused organisation information flows upward and decisions are deployed downward. Thus it has a vertical focus. In contrast, a process-focused organisation has a horizontal focus where handoffs between functions can be better managed.

As an attempt to combine the strengths and minimise the weaknesses of the vertically- and the horizontally focused structures, a mix of the two structure design can be used (Gibson, et al., 2012). An organisation with a mix of the two structures balances the vertical structure by overlaying "a horizontal structure of authority, influence and communication", see Figure 1. (Gibson, et al., 2012). One way to achieve this mix between the vertical and horizontal structure is to adopt process management (Kennerfalk & Klefsjö, 1995).

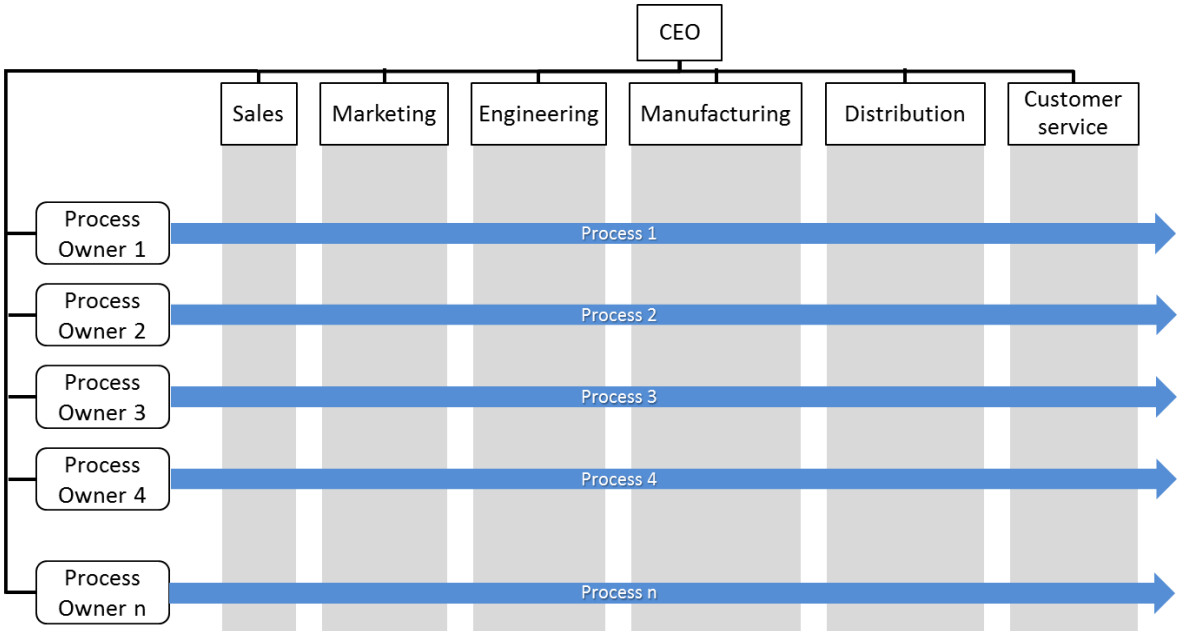

Figure 1. *The mix between functional and process structure.*

The mixed structure (also referred to as a matrix structure) has its strengths in the fact that it enables traditional function-orientated companies to manage complex business processes, enhancing cross-functional communication, and respond to rapid changes in business environments (Bell, 2005). The matrix structure is useful when a company has financial and human resource constraints, face high levels of uncertainties, and when two or more projects or environments must be attended to at the same time, such as market and technology (Gibson, et al., 2012, p.405). However, the mix of a vertical and a horizontal structure leads to a dual authority system, where the employees report both vertically, to functional managers, and horizontally, to process or project owners (Gibson et al., 2012; Larson & Gobeli, 1987).

3.1.2 Quality management

Quality management is defined as "a constant endeavour to fulfil, and preferably exceed, customer needs and expectations at the lowest cost, by continuous improvement work, to which all involved are committed, focusing on the processes in the organization" (Bergman & Klefsjö, 2010, p. 37). Quality management strives to improve quality and customer value by working with areas such as; focus on processes, customer focus, continuous improvements, fact-based decisions, teamwork, and top management commitment (Bergman & Klefsjö, 2010; Dean & Bowen, 1994). Today, it is seen as an effective management philosophy that is suitable in many businesses (Sousa & Voss, 2002).

There is a strong link between quality management and the operational performance of a company (Sousa & Voss, 2002). By delivering what the customer wants, the effectiveness of the organisation increases, e.g. in terms of competitiveness and reduction of costs (Dean & Bowen, 1994). However, in order to gain competitive advantages it is not enough to adopt quality management; it must also be aligned with the company strategy (Hayes & Pisano, 1994). This view is supported by Powell (1995) who argues that the performance of companies adopting quality management show a significant variance, with numerous positive and negative examples. The author further emphasises the criticality of adjusting the philosophy to the company setting and resources. One method to adopt quality management is to use process management, which also favours continuous improvements (Sousa & Voss, 2002; Kennerfalk & Klefsjö, 1995).

3.1.3 Process orientation and process management

Process orientation is the approach of having an organisational focus on the business operations that are performed, often with an end-to-end perspective (Reijers, 2006; Willaert et al., 2007). By being process-orientated there is a need to formally manage the processes, thus process management can be seen as a mean to increase the process orientation of an organisation (Armistead & Machin, 1998; Kohlbacher & Gruenwald, 2011; Škrinjar & Trkman, 2013). An increased process orientation enhances the focus on the processes, which is one of the cornerstones in quality management (Bergman & Klefsjö, 2010).

Process management is popular and frequently used to manage organisations (Searle, 2011b; Pritchard & Armistead, 1999). The main objectives of process management are to identify and improve the business processes, which are the processes that create value horizontally through the organisation (Kennerfalk & Klefsjö, 1995). Processes management comprises four elements; organise for improvement, identify the process, control the process, and improve the process (Melan, 1993). Lee and Dale (1998, p. 217) have a similar definition stated as "a customer-focused approach to the systematic management, measurement and improvement of all company processes through cross-functional teamwork and employee empowerment". Benner and Tushman (2003) argue that process management can be appropriate on stable markets, but highlights that the focus on efficiency and decreasing variations can negatively affect centres of innovation and an organisation's dynamic capabilities.

3.1.4 Process maturity levels

In order to adopt process management and to estimate the magnitude of the change needed it is important to identify the current process maturity level (Olding & Fitzgerald, 2011; Searle, 2011b). There are several different maturity models with different approaches (Röglinger et al., 2012). Nevertheless, Spanyi (2010) highlights the complexity of these models and argues that the link to operational performance is not clear enough, which makes it difficult for management to justify efforts in such models.

Generally, the maturity models use some kind of rating system for different areas within process maturity (Hammer, 2007; Melenovsky & Sinur, 2006; McCormack & Johnson, 2001;

Röglinger et al., 2012). The process maturity areas included in the models can be related to (Hammer, 2007; Melenovsky & Sinur, 2006; McCormack & Johnson, 2001):

- The degree of measurements of the processes
- How well IT supports the processes
- Leadership's view on processes
- Knowledge of process roles
- The interaction between functions and departments

The maturity rating can either be done by employees themselves, by conducting a survey, or by an external part (Hammer, 2007; McCormack & Johnson, 2001).

The PEMM is a maturity model created by Hammer (2007) and is divided into two parts. The first part focused on process maturity investigates the maturity of a specific process, whereas the second part called enterprise maturity investigates an organisation's readiness for adopting process management.

The enterprise maturity model is divided into four categories, of which all has a number of areas (Hammer, 2007). The categories are *leadership*, *culture*, *expertise*, and *governance*. Each area is rated based on four statements related to the process adoption maturity of the particular category, where the lowest degree of process maturity corresponds to rating one and the highest level corresponds to rating four (Hammer, 2007). A company should aim to fulfil all areas before aiming for the next maturity level. In Table 3, an extract of the model for enterprise readiness for process management adoption is presented, see Appendix 1 for the full version.

Table 3. *An extract of Hammer's (2007) maturity model.*

Leadership	E-1	E-2	E-3	E-4
Alignment	The leadership of the process program lies in the middle management ranks.	A senior executive has taken leadership of, and responsibility for, the process program.	There is strong alignment in the senior executive team regarding the process program. There is also a network of people throughout the enterprise helping to promote process efforts.	People throughout the enterprise exhibit enthusiasm for process management and play leadership roles in process.
Style	The senior executive team has started shifting from a top-down, hierarchical style to an open, collaborative style.	The senior executive team leading the process program is passionate about the need to change and about process as the key tool for change.	The senior executive team has delegated control and authority to process owners and process performers.	The senior executive team exercises leadership through vision and influence rather than command and control.
Culture				
Responsibility	Accountability for results rests with managers.	Frontline personnel begin to take ownership of results.	Employees feel accountable for enterprise results.	Employees feel a sense of mission in serving customers and achieving ever-better performance.
Attitude toward change	There is growing acceptance in the enterprise about the need to make modest change.	Employees are prepared for significant change in how work is performed.	Employees are ready for major multidimensional change.	Employees recognise change as inevitable and embrace it as a regular phenomenon.

In the PEMM, if a statement is more than 80 per cent correct it is given a green mark, if it is 20-80 per cent correct a yellow mark, and if it is less than 20 per cent correct it is given a red mark (Hammer, 2007). Green marks indicate enablers of process management, yellow marks indicate areas where more work is needed, and the red ones display obstacles of reaching a higher degree of process orientation (Hammer, 2007). The model can effectively be used to identify areas that are holding back an increased process orientation. It is not until all categories have a green statement the organisation has reached that maturity level. In Figure 2, an example of ratings for a fictive company is presented.

Figure 2. *Fictive company rating based on Hammer's (2007) maturity model.*

The fictive company should address the area of alignment in order to fulfil the maturity level of E-1. Based on the ratings and the prerequisites stated by Hammer (2007), see Table 3 or Appendix 1, the leadership for the process management adoption is either not handled by middle management, or the company does not have a process program. The areas of style, responsibility and attitude toward change are reasonably mature and are currently not limiting a fulfilment of the first maturity level. However, it should be emphasised that there is plenty of work to do in order to fulfil all maturity levels, which is desired in order to become a more matured organisation in terms of being process-orientated.

3.2 The Business Value of Process Management

Process management adoptions often do not provide the desired outcomes and the business value are often poorly demonstrated (Franz & Kirchmer, 2012: Lee & Dale, 1998; Olding, 2013; Pritchard & Armistead, 1999). In order for a process management adoption to enhance the performance and create business value, the adoption must be adapted to the specific company (Kirchmer, 2011). Business value can in the case of a process management adoption be related to; the return on investment, the actual process improvement, and to how much impact the initiative has on the company's strategic business outcomes (Dixon, 2011; Dixon & Searle, 2013).

3.2.1 The potentials of process management

One of the main factors for the popularity of process management is that it can enable a flatter and more agile organisation by creating horizontal communication structures (Kennerfalk & Klefsjö, 1995). A flatter and more flexible organisation could more effectively respond to today's business environment with shorter product and technology life-cycles, volatile financial markets, increased customer and stakeholder demands, and eroding business boundaries (Kennerfalk & Klefsjö, 1995; Lee & Dale, 1998; Searle, 2011b; Pritchard & Armistead, 1999; Bell, 2005). One way to achieve increased agility is to adopt process management, however the business value of it must be visualised to reach a desirable result (Kirchmer, 2011). If the business value is not visualised there is a risk that the process management initiative is eliminated (Searle, 2013).

Processes management can facilitate teamwork and reduce blame culture and the competitive and protecting turf attitude between functions (Hammer, 2002; Kirchmer et al., 2013). Page (2010) further states that in a process-orientated structure a mistake is blamed on the system rather than on the human, which reduces the pressure put on the employees. An increased cross-functional work and customer attention enable a higher transparency within the organisation, which in turn decreases the risk for redundancies, miscommunication, and errors, and helps to improve the responsiveness towards customers (Cantara, 2011; Kennerfalk & Klefsjö, 1995; Kirchmer et al., 2013; Page, 2010).

The common customer focus leads to employees becoming aligned around a common goal, which decreases the risk for functional sub-optimisations (Kennerfalk & Klefsjö, 1995; Hammer, 2002). That view is strengthened by Dell (2005) who highlights that in function-orientated organisations it is common that one department does not know what the other department is doing. In turn, a reduction of these elements can reduce the risk for improvisation and variation (Kennerfalk & Klefsjö, 1995; Hammer, 2002).

Process management in a sales organisation

TeliaSonera significantly improved the visibility of their sales process by adopting process management, which enabled fact-based management (Olding, 2009). The improvement was achieved by addressing areas such as:

- Measuring throughput efficiency and cycle times from one activity to the next.
- Standardising the sales process by harmonising daily responsibilities and ways of working.
- Increasing face-time with customers by reducing post-sales time through defining, and connecting sales support activities and skilled task management.

An increased focus on process management and on processes enables a possibility to incorporate and align customer needs to the business strategy and daily work (Lee & Dale, 1998). This view is shared by DeToro and McCabe (1997) who argue that process management leads to increased customer focus and better communication between functions.

3.2.2 The risks with process management

Far from all process management initiatives end up successful in providing business value (Dixon, 2011). In order to succeed it is critical to be familiar with risks related to process management and to get started, which is one of the most difficult parts (Page, 2010).

To reach the desired outcome of the initiative, it is crucial to decide on how to measure and direct the change (Dixon, 2011). Many organisations fail because the results are not quantified and positive results are not communicated (Searle, 2013). If there is no competence centre dealing with process governance and management, it will be difficult to link process management to the business outcome. Furthermore, it is important that the competence centre acts cross-functionally, even though it sometimes might be inconvenient due to functional boundaries and authority (Searle, 2013).

The decision to adopt process management and deciding where to start should be based on facts (Dixon, 2011). Otherwise there is a risk that the problems to be solved by adopting process management are not really related to the process, which can jeopardise the credibility of the process team. This view is supported by Searle (2011b) who also states that a lack of process management knowledge among project managers can be troublesome, and that a common mistake is to underestimate the efforts needed to adopt process management.

Nilsson (1999) highlights that dividing everything, even the smallest activity, into processes could create a focus on parts instead of the whole, in opposite to the intention of process orientation. There is a risk that too much focus is put on mapping processes or on measuring, and thus no process improvements are carried out (Dixon, 2011; Lee & Dale, 1998). Lee and Dale (1998) state that mapping the processes does not create value itself, especially if the maps are not used or communicated in the daily work. Johnson et al. (2003) argue that a too horizontal structure would be in conflict with the principle of specialisation, and thus needs to

be balanced. Franz and Kirchmer (2012) and Benner and Tushman (2003) further argue that a too high process-focus can limit creativity and pro-innovative activities.

In a structure balanced between a vertical and horizontal focus, employees report vertically to functional heads and horizontally, usually, to process owners (Gibson et al., 2012; Larson & Gobeli, 1987). The dual authority system in a process-orientated organisation can lead to increased amount of e-mails, meetings and communication channels due to the need of informing two managers (Hall, 2013). Hall (2013) argues that it can be difficult to prioritise goals and expectations from two authorities and power struggles between the functional managers and process owners can occur.

3.3 Adopting Process Management

The strategy for adopting process management needs to be adapted (Pritchard & Armistead, 1999; Kirchmer, 2011). An unsuccessful adoption can be very costly for a company, and especially the size of the company needs to be considered and adapted to (Kirchmer, 2011).

3.3.1 How to begin?

Process management needs to be adapted to the specific setting (Pritchard & Armistead, 1999). Even though process management should be adapted to the specific setting some commonalities exist in how adoptions are designed. Common adoption elements include; having clear goals of the intervention, possessing the right competencies and skills, and aligning it to the company strategy (Pritchard & Armistead, 1999). Moreover, one critical success factor for adopting process management is to maintain a holistic view of the organisation and its work during the adoption, in order to keep aligned with the business strategy (Searle, 2011b).

Before starting the adoption it is wise to investigate how ready the organisation is for process management and what will need to be changed (Searle, 2011b). This is preferably done by evaluating the process maturity level of the organisation. In addition to process maturity, a high degree of quality management maturity could be helpful for a successful change of the organisational structure (Armistead & Machin, 1997). It can further be beneficial to perform an analysis of the current culture, since it can help to identify process management objectives (Olding & Searle, 2011a).

Searle (2011b) states that the adoption of process management should not be seen as a one-off project, but it should rather be continuously improved. Franz and Kirchmer (2012) argue that creating a process to drive process improvements is closely connected with a successful adoption, since it will help in organising the efforts and ensure proper management. The authors (p. 37) state that such a process for process management will help to e.g.:

- Focus attention on critical process areas
- Align process management with strategic priorities
- Transfer successes and make them repeatable

- Make process management a part of the whole organisation
- Ensure lasting solutions and sustaining efforts

In order to increase the possibilities of a successful process management adoption, it is essential that the first project is successful (Olding & Searle, 2011b). Hammer (2007) states that departmental successes can boost an entire organisation. Armistead and Machin (1997) argue that the first process to address should be an operational process since these are the processes affecting the customers, meaning that results are more easily visualised. When the operational processes have been covered the next suggested step is to address the support processes.

Page (2010) stresses the difficulty in getting the process management project started. In order to more easily prioritise what processes should be improved, she suggests that an inventory list of the processes to be improved is created. Then each process should be connected with a criterion. Each criterion should, at least, be based on the factors of *impact*, *implementation*, *current state*, and *value* (Page, 2010, p.23).

A successful adoption will require that the desired outcomes are clearly defined and envisioned (Hammer, 2007). It is further important to communicate the project's progress to its stakeholders. Dell (2005) also emphasises the importance of communicating the vision and further states that team-based rewards favouring process work will also be important in order to maintain the engagement level.

The enterprise system can facilitate change, and it could effectively be used to redesign the business processes of a company (Davenport & Short 1990). Searle (2011b) support that view and argue that there is a close relationship between process management and enterprise systems, where the enterprise system provides the context for process management to operate in (Searle, 2011b). However, it is necessary to understand that the enterprise system is only one part of process management (Dixon, 2011).

3.3.2 Establishing process-centred measurements

Effective measurements have a central role in enabling continuous improvements in a company (Armistead & Machin, 1997; Kaskinen, 2007). By having a high degree of process orientation it is possible to naturally incorporate measurements to the organisation (Armistead & Machin, 1997). Some of the most common measurements, in terms of how to demonstrate improvements, are: *cost reduction*, *increased quality*, *increased customer satisfaction*, and *increase in sales volume* (Searle, 2011a). The measurements should both measure efficiency and effectiveness (Stakenas & Sengar, 2012). Examples of measurements for a sales process are; *time to identify prospect*, *forecast accuracy*, and *sell cycle time*.

One way to measure the performance of a business is to use *key performance indicators* (KPI) (Kaskinen, 2007). Identifying and analysing KPIs are critical steps to gain a holistic approach to process management, and are crucial for process optimisation (Kronz, 2006). According to Searle (2011a) it is important to have correct and easy-to-interpret measurements, in order to visualise the benefits of working more process-orientated. KPIs are effective both for

strengthening weak areas and enhancing already high performing areas (Kaskinen, 2007). Kronz (2006) highlights the importance of having a connection between the measures and the processes. In order to connect the measurements with the processes and establish effective KPIs, steps such as aligning the KPIs with the strategy, and establishing benchmarks could be useful (Kaskinen, 2007).

Before starting the process management effort the organisation should map the performance of the process that will undergo change, so that it is possible to measure improvements (Searle 2011a; Dixon & Searle, 2013). Searle (2011a) stresses that the progress should not only be measured before and after, but also during the intervention. Furthermore, a process owner should have the responsibility for all measurements, making sure that they are updated and revised in order to continuously improve the results (Dixon & Searle, 2013).

3.3.3 Create a governance structure

It is critical to set up a competence centre, in order to govern the progress, and to structure and drive the process improvements (Franz & Kirchmer, 2012; Olding & Fitzgerald, 2011; Searle, 2011b). The competence centre should overlook, align, and structure the processes, as well as, provide methods for process management projects (Lee & Dale, 1998; Searle, 2011b). Willaert et al. (2007) argue that having a proper competence centre ensures that the processes meet the expectations. Searle (2011b) suggests four main roles that should be included in the competence centre, as defined in Table 4. The centre should have a close relationship with the executive sponsor and process owners, and the team needs to both have process knowledge and skills in change management (Searle, 2011b). Preferably, members of the team should be internally recruited, and the knowledge should be transferred to the rest of the organisation in an effective manner.

Table 4. *Roles in the governance team (Searle, 2011b).*

Role	Definition
Process director	Driver and organiser of the governance team.
Process consultant	Source of experience and expertise.
Process architect	Bridge enterprise system and process management, which is crucial for success.
Process analyst	The analyst works hands-on.

Sommerlatte and Wedekind (1990) argue that there should be a governance group in each process as well. The governance group should preferably include members from different functions, thus lowering intermediaries between the functions as much as possible. The governance team should ensure correct documentation so that there is a consistency and repeatability of the performance, relevant measurements to assess the output, and continuous improvement (Lee & Dale, 1998).

In contrast, Sinur (2011) states that although a process hierarchy will enable process efforts to be designed more effectively, an organisation desiring immediate process benefits might

temporarily postpone the creation of a process hierarchy and start with performing process improvements on a project-by-project basis. It is important to realise that the design of the governance structure, in form of competence centre and governance groups, might need to go through several iterations before a final design is agreed upon, and that feedback from the early projects can be used as an input to the iterations (Olding & Searle, 2011b).

Companies establishing process governance structure have been better at performing cross-functional efforts that create business value (Searle, 2013). Searle (2012) further states that by performing a skills gap analysis, it is possible to identify what skills will be needed in order to make the adoption of process management successful. Then a decision can be made what skills will be needed internally, and what can be brought in externally when needed.

The role of the process owner is crucial for process management to succeed and it should be accountable for the end-to-end performance of the process (Searle, 2012). Robertson and Searle (2012) stress that the process owner role needs to have clear scope, responsibilities, and incentives in order to create engagement to the role. Incentives for the process owner could be in terms of rewarding successful examples. It is important that the reward takes into account end-to-end perspective and functional goals, thus it is beneficial if the process owner is a senior stakeholder, with credibility and authority, who acts in the interest of the enterprise as a whole and not functional authorities (Rosser & Dixon, 2010; Robertson & Searle, 2012; Searle, 2012).

Rosser and Dixon (2010) stress the importance of paying attention to the process owner and the result of its work in order to sustain the process owner role. In order to support the process owner and make sure the daily work in the process is executed as intended there is usually a process manager with close relationship to the process owner (Alexander, 2013).

3.3.4 How to foster the organisational change?

Generally, a change is often troublesome and in the rapidly changing business of today there is a significant risk that a feeling of change fatigue emerges in an organisation (Olding & Fitzgerald, 2011). The change resistance is usually seen as something natural for human beings, which makes it important to identify the resistance drivers and attention needs to be paid to the experience of each individual (Kets de Vries & Balazs, 1999). It is further necessary to keep a clear communication with the employees, since companies often underestimate the scope of their process management adoption (Searle, 2011b).

Nadler & Tushman (1997) stress management's responsibilities in organisational change, and divide them into three categories, as outlined in Table 5.

Table 5. *Management's responsibility in organisational change (Nadler & Tushman, 1997).*

Category	Management's responsibility
Power issues	- Gain support from power groups. - Use leadership to demonstrate support.
Anxiety and change inertia	- Provide education. - Communicate ambitiously and also what is not going to change. - Motivate constructive behaviour through e.g. rewards and recognition.
Controlling the transition	- Keep a transparent and continuous communication. - Use transition devices, such as a transition plan. - Establish feedback channels.

First, power issues will arise during an organisational change and in order to overcome them top management's commitment will be important (Bergman and Klefsjö, 2010).

Second, organisational change will generate anxiety throughout the organisation and in order for the employee to be willing to adopt the change there will be a need to "unfreeze" their inertia (Nadler & Tushman, 1997). This can be done e.g. through motivating a constructive behaviour, and by communicating what is not going to change. Connected to the inertia, before organisations can learn new things they need to unlearn past knowledge, and that is especially hard when old knowledge has contributed to earlier success (Nystrom & Starbuck, 1984; Kets de Vries & Balazs, 1999).

Third, there will be a need to continuously control the transition during the change, due to the high level of uncertainty during organisational change (Nadler & Tushman, 1997). Keeping a transparent and continuous communication with your employees, using transition devices such as a transition plan, and establishing feedback channels are examples of how to control the transition. Olding and Fitzgerald (2011) also stress the importance of keeping a clear communication, and that it should be directed to both internal and external stakeholders. In order for employees to overcome their natural resistance, the magnitude of the change must be known, which depends on the gap between the current and desired state (Olding & Fitzgerald, 2011; Searle, 2011b).

There are discrepancies among authors whether process management should start in senior management or if it is a team-orientated bottom-up approach (Lee & Dale 1998). Olding and Fitzgerald (2011) highlight the importance of both having a bottom-up and top-down approach, whereas Dell (2005) rather emphasises that the intervention must have top-down commitment to be successful. Strong top management support is needed in order for process management to maintain connection with the business strategy (Harrington, 1998; Franz and Kirchmer, 2012). Kirchmer (2011) states that management needs to translate the business strategy into process-related goals. Lee and Dale (1998) and Searle (2012) stress that employees needs to be included in the process management adoption, in order to really understand how they work, what can be improved, and enable the employees to become more accepting towards changes.

Organisational learning starts on the individual level and is then shared across the organisation (Tsang, 1997; Kets de Vries & Balazs, 1999). Olding and Fitzgerald (2011) also highlight the benefits of focusing on the individuals in a change process so that each individual can see the personal benefits of the change. An effective technique to achieve a focus on the individual's change is to work with individual change resilience training (Olding & Fitzgerald, 2011). Reaching organisational learning requires the hard task of replacing the individual blame culture with a culture of openness and mutual understanding (Kirchmer et al., 2013). To reach a change-friendly environment in the organisation leaders must create an open culture where it is legitimate to question why things are done as they are (Kets de Vries & Balazs, 1999). Schmiedel et al. (2013) state that in order for a process management adoption to become successful, the four cultural values of *customer orientation*, *excellence*, *responsibility* and *teamwork* will be required.

Organisations usually meet natural resistance when going to a more process-orientated structure (Lee & Dale, 1998; Searle, 2011b). In order to successfully make use of process management and overcome the natural resistance, it is critical to work for creating a more process-orientated mindset (Kennerfalk & Klefsjö, 1995; Kohlbacher & Reijers, 2013). The mindset should be "build to change" rather than "build to last" (Cantara, 2011; Searle, 2011b). This is supported by Dell (2005) who argues that process management is not adopted solely through having the right structure in place; it requires a change in mindset as well. Kennerfalk and Klefsjö (1995) emphasise that the change in culture and mindset significantly changes the role of managers, in a function-orientated structure managers act like fixers solving problems and knowing everything, while in a process-orientated structure the managers are seen as coaches supporting the employees making sure everyone is performing at their best level. It is also important that management provides employees with enough time, in order for them to build cross-functional trust (Sever, 2007).

3.4 Synthesis of Theoretical Framework

Based on the theoretical framework main potentials, risks, and critical aspects in an adoption have been identified, which are presented in Table 6.

Table 6. *Potentials, risks, and critical adoption aspects, according to theory.*

Potentials	Risks	Critical aspects in adopting
- Facilitates teamwork and reduces blame culture (Hammer, 2002; Kirchmer et al., 2013). - Higher horizontal (cross-functional) transparency and cooperation (Cantara, 2011; Kennerfalk & Klefsjö, 2010; Pritchard & Armistead, 1999). - Increases the focus on and improves the responsiveness towards customers (Page, 2010). The customer focus creates an alignment between employees (Kennerfalk & Klefsjö, 1995; Hammer, 2002). - Increased resource utilisation, e.g. in terms of less sub-optimisations, fewer misinterpretations, and fewer quality issues (Kennerfalk & Klefsjö, 2010; Kirchmer et al., 2013; Page, 2010).	- Fail to link process management to business value (Dixon, 2011; Searle, 2013) - Too much focus on mapping or measuring, too less on improving (Dixon, 2011; Nilsson, 1999; Lee & Dale, 1998). Too high focus on processes can limit specialisation and innovation (Franz & Kirchmer, 2012; McCormack et al., 2003). - The dual-authority system can lead to extra administrative work, and difficulties to prioritise between vertical and horizontal interests (Gibson et al., 2012; Hall, 2013; Larson & Gobeli, 1987).	- Process management requires relevant measurements, in order to demonstrate the achieved benefits (Armistead & Machin, 1997; Kaskinen, 2007; Olding & Searle, 2011b). - A governance structure together with a process competence centre can help to facilitate structured and continuous process work (Franz & Kirchmer, 2012; Olding & Fitzgerald, 2011; Searle, 2011b; Sommerlatte & Wedekind, 1990). - Important to have clearly defined and communicated goals for process management (Dell, 2005; Hammer, 2007). - Strong top management support (Franz & Kirchmer, 2012; Harrington, 1995). Management will need to handle power issues, anxiety and change intertia, and will need to control the transition (Nadler & Tushman, 1997). - Discrepancies if focus should be top-down or bottom-up (Lee & Dale, 1998).

4 CASE STUDY

This chapter presents empirical data gathered from interviews and internal documents, at the case company. The information presented derives from case study interviews, if not explicitly stated otherwise.

4.1 Introduction to the Case Company

The case company has received a directive of adopting process management from its company group headquarters. The directive is communicated from senior management within the company group and is seen as a way to align its different business areas. Interviewees have emphasised that the case company has less resources than the other companies within the group, and have stressed that because of that the process management initiative must be adapted to the case company in order for it to become beneficial. One of the biggest fears expressed by interviewees is that a process management initiative would create constraints in how one should work and that it would consume too many resources, better spent elsewhere.

The investigated company is a global manufacturer and is part of a large and international group. The company has a turnover of less than ten per cent of the group's total turnover, which means that they have less financial and human resources than the other business areas. Hence, each employee's role often has wider responsibilities than in the other group companies.

The company has approximately 1500 employees and is global with offices on several continents, although a large part of the personnel is located at the headquarters. The company is divided into three sales regions, where the sales region of Europe is the largest. The company is present in several product segments, and the industry that the case company is active within have so far been characterised by stable markets and low technological disruption.

The case company experienced a big decrease in sales during the financial crisis of 2008 and during the later crisis of 2011. The sales volumes have remained at lower levels since then and thus the main priority for the company is to increase the sales volumes.

During the interviews a fear for going full-head into the process management initiative was expressed due to previous failures, and especially with the recent frustration with the centralisation of the IT support in the group.

Previous process management adoption attempts

Attempts to adopt parts of process management were conducted in 1996 and 2000. Much time was spent on detailed process mapping, but they were never believed to become good enough and they never really described how the employees worked. Interviewees state that the right process competence were missing, and no real emphasis was put on informing and educating the employees of the reasoning behind the adoptions. Process management became somewhat of an additional layer put on top of the current organisation. The process roles existing in the company today derive from these adoption attempts.

4.1.1 Reasons for previous success

Traditionally, the company has been performing very well, and has during the last couple of years made greater percentage gains than the other group companies. The reason behind the company's success is by interviewees believed to be its great focus on cost, prioritisation, and product and technology innovations.

Several of the products released have been innovative and high-end, which competitors have not been able to match. This is seen as a major reason to why the company has been able to continue to make profit so far. Several interviewees put it as: "The company was saved during the 2000s recession thanks to the launches of innovative products".

Interviewees also explain the previous success by that the company's brand image has been strong, that the engagement among employees has been high, and that the case company has had an ability to quickly adapt to changes which has enabled the avoidance of several pitfalls.

4.1.2 Recent shift in customer and product segments

Traditionally, the case company has mostly been targeting private end-customers, with a seasonal product. If such a customer is left unsatisfied with a product or its delivery, the customer would probably feel frustrated with the loss of product use. For the case company it would most likely lead to complaints in terms of emails, phone calls, letters of complaint, or in rare cases a lawsuit might be filed.

Recently, a shift towards industrial customers has taken place, with products aimed at industrial applications. Industrial customers put more emphasis on e.g. quality and in time deliveries. For an industrial customer a late delivery would rather result in production stops and direct costs related to the loss of work. If an industrial end-customer is left unsatisfied, a costly lawsuit would most likely be filed.

Since the number of industrial end-customers is increasing, the requirements for e.g. higher product quality and more reliable deliveries are increasing. Some industrial customers expect a problem to never occur more than once, and some of them have higher demands on, and work better with, quality than the case company.

4.1.3 The process management directive

The main purpose of adopting process management within the company group is to reach a common structure for higher level processes between the group companies, which could lead to a higher effectiveness e.g. within operations. There is a belief that it is possible to reduce redundancies between the group companies, especially due to several recent acquisitions of other companies.

The group has established the directive on how the process management initiative should be structured. According to the directive, the company function Process & IT will be responsible for carrying out the effort. By placing the responsibility for process management in a function such as Process & IT, a holistic view is seen to be maintained compared to if it is placed in any of the main functions. The preparations for adopting process management in the case company are handled by Process & IT and some middle managers.

On the highest process levels in the case company roles such as process owner, process manager, process developer and process key user should be created. Issues related to the not-invented-here syndrome should be handled by process key users providing local support and implementation.

According to the directive, education will be offered to all employees in terms of an e-learning seminar which takes about 30 minutes to complete. Additionally, all employees with a process role will get a basic half-day course in process management. Process owners and process managers will get a full day education.

The start of adopting process management is currently planned for 2015, and it should be fully adopted in 2017. Interviewees from the company group have stated that it will be possible to adapt parts of the process management efforts to the business model of the case company. The case company will need to adopt the group's standard structures for the management and support processes, while the operative processes is allowed to be kept if the advantages of the currently used processes can be shown.

4.2 Current Organisation

The representatives within top management include; CEO, CFO, and the functional managers of Human resources, Sales, Product development, Aftermarket, Logistics, and Production. In addition to the main functions there are four main processes; Product development, Sales, Production and delivery, and Aftermarket support. The processes have been divided with regards to what adds the most value to the business, and each process has an appointed process owner. Each of the main process owners are represented among top management. Generally, the processes coincide closely with the functions, and to support and control the main processes there are established support and management processes. See Figure 3 for a simplified illustration of the case company's organisational chart.

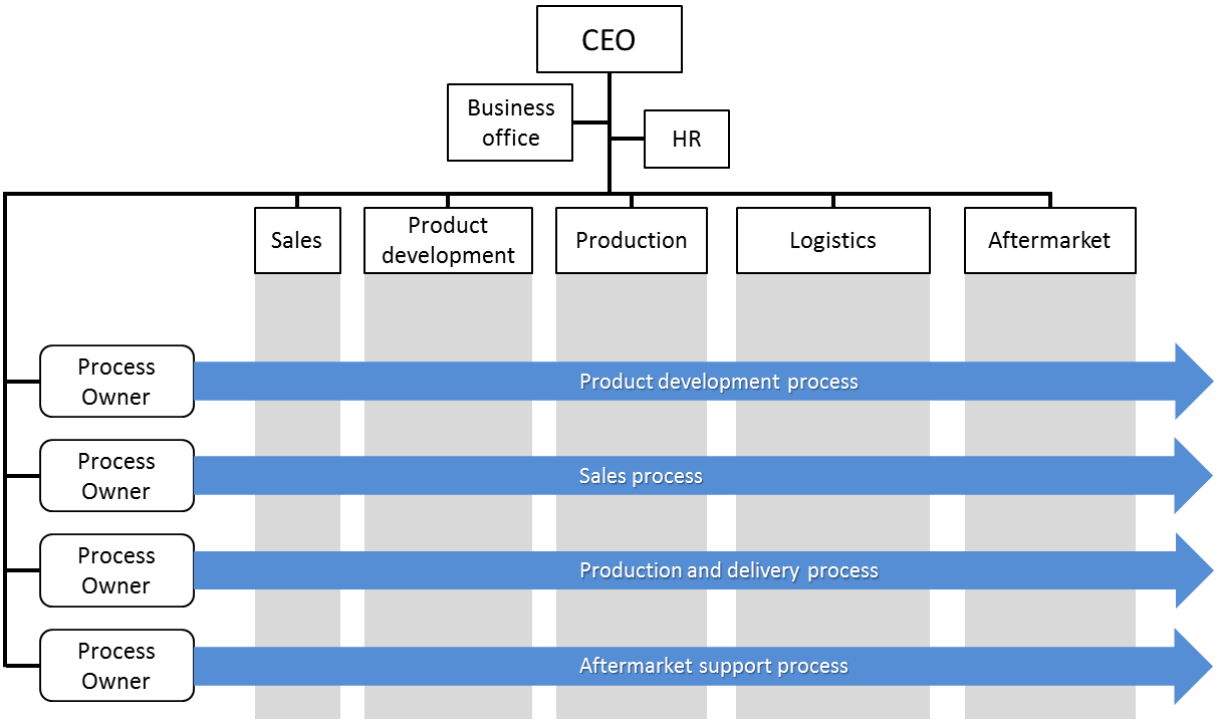

Figure 3. *Simplified organisational chart of the case company.*

4.2.1 The case company's current process maturity

The process maturity in the company is by interviewees seen as low and unbalanced. The closer to where the issues are handled, the more understanding for the need of process management or process orientation is stated to exist. While some interviewees state that "The case company is already very good at working process-orientated", others state that "The case company has a lot of work to do in order to become process-orientated".

In general, there is little knowledge about process-related terms such as processes, process management, process maturity, process inputs and outputs, and process owners. Most interviewees are aware that there are four main processes in the case company, but most of them also state that the main processes are not related to in their daily work. Also, among the process owners of the main processes the definitions of each process and/or the responsibilities are sometimes unclear. In terms of process improvements, one interviewee states that "We do not have a coherent picture of what processes we are working on, or why". An internal survey further suggests that the current organisational structure does not support the desired culture that is worked towards (Internal Document 3, 2013).

When cross-functional work is needed today, there are different forums and groups established crossing the functional boundaries and instead of using horizontal processes, projects are most often used. For urgent and more prioritised projects, the project team is cross-functional and full-time, where employees leave their functions and are co-located. In other projects, meetings can be held once a week and only a few hours are spent in the cross-functional team. Interviewees have stated that the cross-functional work has been facilitated by having most expertise and functions centralised and located near the headquarters.

4.2.2 Knowledge sharing

Interviews have shown that information about the process management initiative is most widespread within top management, and becomes less known further down in the organisation. Interviews show that the process management work has not been communicated in a structured way, or at all, within the organisation so far.

Surveys conducted within the case company together with case study interviewees have shown that, employees think the company is lagging in terms of teamwork and collaboration within the company group (Internal document 1, 2013; Internal document 2, 2013; Internal document 3). The surveys have also shown that employees view the organisation as relatively bureaucratic, is slow at solving customer problems, and that employees find the communication from top management to be insufficient at times. Interviewees have also stated that some customers view the case company as "hard to do business with".

Knowledge is by interviewees said to often be possessed by individual employees and managers with great experience and responsibility, but the knowledge often becomes isolated within these individuals. This phenomenon is described by some interviewees as knowledge becoming isolated like islands, and is by interviewees said to illustrate a lack of organisational learning.

4.2.3 Issues related to the current functional focus

Although there are four main processes in place, interviews have revealed that the work is mostly managed within the functions. Functional work is said to be built into the company's culture, and whether or not the interviewees see it as a deficiency has varied. The authority possessed by functional managers is strong by case company tradition, making it hard for process owners to get attention on issues involving other functions.

There are plenty of examples of miscommunication and hand-over problems within the organisation, and they often arise in functional and process boundaries. The magnitude of such a problem is by interviewees said to depend on the nature of the task, and the functions involved. For example, assembling a product is much more hands-on and thus has fewer problems, while classification, documentation, and software design tasks are less hands-on and thus easier lead to miscommunication and hand-over problems. The hand-over problems are said to occur everywhere in the organisation, and together with poor communication they cause costly reworks, and waste time.

Interviews have also shown that the regional distance is a factor, where departments located far away from the headquarters tend to have less input on e.g. product portfolios and strategies than the European region, which is closest to the headquarters. Interviewees have expressed that by receiving more information on what is decided, and what is not decided, they would have a better alignment with the work carried out at the case company's headquarters.

The functional focus can further be seen in the improvement work of the company. The majority of improvements are carried out by individuals in each function and the improvement work is most often directed to improve the performance of the own function.

Thus, it is hard to allocate resources to cross-functional problems and to look upon problems from a more holistic, end-to-end, point of view. This can for example include problems that are relatively small for each function but by affecting several functions they can go undetected, unsolved, and cause greater problems downstream.

Lack of common priorities

There is an expressed unbalance in priority levels between different departments when it comes to customer issues. No one has an overall perspective of the customer issues, which easily leads to issues falling into functional cracks. Some customers have been waiting several months.

Interviewees state that the problem solving carried out throughout the case company is often managed by informal leaders with much knowledge and experience, acting as fixers stepping in at the last minute to solve the issues. This has led to many problems being resolved short-term through so called fire fighting instead of using long-term and preventive means. Historically, this way of performing problem solving is said to have been viable in the case company since a majority of the end-customers has been private customers with seasonal and fairly infrequent buys. For that kind of customers a problem costs time, but most often nothing more than that. Since it is a seasonal product it can be fixed during off-season, and a delay during off-season will usually not significantly affect the end-customer.

Lack of end-to-end understanding

Software has become a bigger issue since the electronic parts of the products has increased. The programmers often have too little knowledge on how the products are actually used, and thus have a hard time realising the effects of a small change in details.

Interviewees also state that the mentality with some employees is that as long as the product is launched it is up to production and aftermarket to deal with the rest. One reason for this occurring time after time is said to derive in a cultural issue where aftermarket and other functions do not have the guts to say no and to deny projects passing a gate due to the requirements not having been fulfilled. Other state that it is a mindset problem within PD, that exists due to a lack of end-to-end understanding.

4.2.4 KPIs and measurements

There are no real incentives for working with processes today, which partially is said to be explained by that performance is not measured on process and end-to-end efforts, but rather on functional efforts. Interviewees believe this could be the reason for the gaps that exist between functions and processes today. The majority of the KPIs used within the company are established with the function in mind rather than the process, which is said to have led to sub-optimisations. Interviewees have stated a big potential for starting to measure the efficiency of cross-functional, end-to-end, throughputs, e.g. in terms of time and cost.

Partial measurement

Product development prioritises time-to-market, but often neglects the readiness of documents, manuals, or even the product quality. Thus, at times the shorter time-to-market is at the expense of extra administration, or higher costs of poor quality, downstream in the organisation.

Interviews have shown that many functions try to integrate the customer's perspective in their KPIs. However, several of the functions do not anchor the KPI target values with the customer, thus it is rather based on estimations of what the function believes that the customer appreciates. It is said to exist many possibilities to use more customer-based KPIs such as "a customer's desired delivery date versus actual delivery date", or to conduct development projects together with the customer. For example, one department had a KPI target of returning internal issues within 3 hours, whereas the issuer wanted a response within 10 minutes. Therefore, there is an expressed need to harmonise KPI target values.

Another example mentioned by interviewees was that the sales department does not measure how the customer experienced the purchase and does not keep track of the loss of sales, which several employees stated to provide huge potential. To the experience of some interviewees, you start to realise the improvement potential when you start measuring more holistically.

4.3 Main Processes and Support Functions

The organisation is divided into four main processes, which are intended to cover the end-to-end perspective. To support the main processes there are support functions such as IT and finance. Many of the support functions are grouped under the unit business office.

4.3.1 Product development

This process is responsible for providing a total offer of hard and soft products that reflect the customers' needs. This process is said to have the largest budget, which is provided on the functional level.

Based on interviews, a recent *lean product development* initiative has meant a great deal for how well-defined the processes are and for the way they work with the same. Although, PD is said to have had well-documented internal processes also before the lean initiative started. The reason for that is said to be that the high level of uncertainty faced in a product development environment requires a more structured approach by nature.

Even though some interviewees state that PD has a process-aware mindset, other interviewees state that they do not work from a cross-functional end-to-end perspective. The focus is rather said to be on their functional efforts. For example, in a product launch project the focus is on reducing the *time to market*, which tend to lead to a postponing of things such as creating manuals, making sure the sales force has full knowledge about new product specifications, and ensuring producibility aspects for downstream processes in general. Furthermore, it is

said that “Sometimes when support is needed for a service-related issue, such as ordering of OEM parts, there seems to be little understanding or attention from PD’s part”.

PD’s budget is set by the number of projects run, while other functions’ budgets are more static. This was expressed as tricky by some interviewees, since it could create an eagerness to launch and close projects as soon as possible, in order to get financial resources for the next project.

4.3.2 Sales

The Sales process deals with everything related to sales and marketing. The process has a clear customer focus and is global, diversified, and multi-cultural. It should provide the customer with information on product and service offerings, service benefits, and product features. Customer feedback should regularly be used as input for improvements.

The sales department is divided into three regions, each region with its own manager. Each region is responsible for implementing what is decided by the sales administration. One of the regional managers possesses the process ownership of the Sales process. Thus, the process owner only direct mandate to influence one of the regions. Processes and process roles are not used to a large extent within the Sales process.

Due to the financial recession in 2008, the current focus in the Sales process is to increase the sales volume, especially within the industrial customer segment. Some interviewees argue that one of the most critical parts of increasing sales is to increase face-time with the customer. According to an internal survey conducted within region Europe, up to 90 per cent of a sales person’s regular day can be spent on administrative tasks (Internal document 4, 2011). Interviewees state that a large portion of the time spent on administrative tasks could instead be used to face customers, and as a reference internal guidelines suggest that a more reasonable percentage to be spent on administrative tasks is 30 per cent.

> **Customer face-time**
>
> Sales personnel are frustrated with low customer face-time, which has seen to vary between 30-60%. In addition, Sales managers’ time spent on sales generating activities are sometimes as low as 10-30%. Much time is spent on administrative tasks, IT handling, and on fetching information from other departments (Technical documents etc.).

Several interviewees, from other functions than Sales, highlight a desire of receiving more information from what is in the sales funnel, and more accurate sales forecasts. This was said to e.g. affect the preparations possible in the case company’s supply chain, in terms of resources, competence and material.

Interviewees stated that there is no standardised process for educating sales people, but that it rather is up to each region or segment to decide how they want to do it. Interviews have

shown that in the end, the possessed skills of a sales person rather depend on the experience of the individual.

4.3.3 Production and delivery

This process makes sure the customer receives the ordered products at the desired delivery point and on the agreed upon time. The work for this process begins as soon as the order is placed, though supply chain preparations for upcoming orders are also carried out through forecasts. The process and functional responsibilities coincide to a large extent, since the process owner is also a functional manager over production and distribution.

The process roles of process managers and process owners have already been appointed on some process levels within the production and delivery process. Though, the roles are not entirely used as intended yet, partly due to scarce resources and partly due to much time being spent on solving quality issues and IT problems. Some employees are said to solely work with problem solving instead of what they are actually hired for.

During the implementation of a new IT system starting in 2009, some emphasis was put on process maps, creating process governance and defining process roles, which helped employees to gain some process awareness. However, employees state that the implementation of the IT system was poorly designed and that the governance group handles too many IT issues and lacks focus on process work. According to interviewees, problems arising during the implementation ultimately led to that some small customers were lost.

4.3.4 Aftermarket support

The responsibility of the aftermarket process starts as soon as the product has reached the point of delivery. The process ensures that the customer receives the promised parts and services. The process also strives to improve the customer experience of the total offer so that the customer is satisfied, and that customer loyalty is secured and hopefully increased. Customer feedback and customer needs are incorporated in order to deliver an offer that satisfies the customer. The process ownership of the aftermarket process largely coincides with the function of Aftermarket.

In order to learn from each other, experienced issues are discussed with other regions through aftermarket councils taking place quarterly. To reduce the risks of larger projects, product boards and steering committees are used. In order to make sure that mistakes are not repeated and that knowledge is spread, white books are used. However, some interviewees state that the books are not always used at a satisfying frequency.

Customers receiving the wrong products

A common problem is customers receiving products not suited for their needs. E.g. some customers are provided with a product that is too small for their need. Similar problems are experienced when a part that has been designed within the company group are sold to a case company customer, even though the part has not been designed to be used in that specific environment.

4.3.5 Business Office

The business office deals with support and administrative questions like finance and business control.

In total, more than 200 different IT systems are being used within the firm. The relatively high number of IT systems is seen to limit the ability to integrate processes and in turn hampers the integration of functions. Complaints have been heard from all functions and processes that the IT systems are too many and confusing.

The recent implementation of an IT system, affecting primarily the Sales and Production and delivery processes, has created extra administration, where several activities has been added that does not add value, but rather must be carried out only to "please the system".

Within the company there are Teamplace sites that are dedicated for a specific function, region, project or department. The purpose of these systems is to share data and project information that are only relevant for the involved team, thus keeping a better focus on what matters to the team. Usually, access to these sites is only provided to employees in the affected team. Nevertheless, interviews have revealed that some of the locally stored information actually is relevant for others as well, such as process maps and process definitions. For example, information that is put on a functional Teamplace is not accessible by anyone outside of the functions. Information about processes is also stored in a business management system, which is accessible to all. However, some interviewees have declared that the information in the system is poorly updated, hard to manoeuvre, and that it sometimes is hard to understand the benefits of using the system for the daily work.

No end-to-end process for design changes

The design change notice (DCN) "process" is separated into functional sub-processes, and is not end-to-end. Some functions store its DCN process on their Teamplace, which makes it inaccessible to people outside of their function.

4.4 The Potentials of Adopting Process Management

Many of the interviewees state that the case company has less to gain from the process management initiative, than the larger companies in the group. Though, as long as the initiative is adapted to the case company and implemented in a good way, the large majority of the interviewees state several possible benefits. In general, interviewees stated that by providing a clear understanding of process management, and by concretising its benefits, the buy-in for the adoption would increase. The potentials expressed by interviewees are presented in Table 7.

Table 7. *The expressed potentials of adopting process management at the case company, according to interviewees.*

Potentials	Description
Customer focus	Leading to better understanding of customer requirements.
Cross-functional understanding	Better cross-departmental cooperation and communication, and decreased risk for sub-optimisations.
Work process understanding	Providing better understanding of current processes and the way of working.
Resource utilisation	E.g. lower cost of poor quality, less work redundancies, and higher economies of scales within the company group.
Solid processes	Standardised processes can decrease variation between regions, and better defined processes will e.g. make accountability clearer.

4.4.1 End-to-end awareness

Interviewees state that by increasing the level of process orientation, and thus having a horizontal transparency in the company, the organisation could better understand the customer's requirements. In turn, this was seen as something that could decrease the mentality of "we are already best, we have nothing to learn". During the interviews at the case company, it was also stated that a customer-focused approach, where common goals are used, would help to overcome the lack of cross-functional cooperation.

> **Neglecting the customer**
>
> A sales order is entered with a promised delivery date in August. In August the customer contacts the case company and asks for his product. Even though the involved sales personnel has tried to stress the importance of this order, the coordination with or within other departments has failed. There is no one with an end-to-end responsibility to ensure the customer gets what was ordered. In the end, the order had to be delivered at a higher cost for the case company, and later than what was agreed with the customer.

By having common goals to strive towards and with an increased cooperation between departments, interviewees state that the understanding for what their colleagues do and do not do would increase. This would decrease the risk for sub-optimisations between departments, reduce duplication of work tasks, and would decrease the risk for things falling into cracks between departments. Decreasing hand-over problems was expressed by the interviewees as one of the biggest contributions that process management could provide the company with. This was especially emphasised by employees working in processes interacting with many different departments at the same time.

Since the case company has moved towards a more balanced business model using more product segments, the demands put on their organisation by customers has increased and changed to some degree. Some of the interviewees stress that this new situation, together with decreasing sales volumes and an increased cost of poor quality, has created a need for higher

process, and end-to-end, awareness. Some of the interviewees found process management to be a good way of achieving that awareness.

By increasing the end-to-end awareness, e.g. quality issues would become easier to prevent thanks to decreased miscommunications and more holistic understanding of where the product will be used. For example, by having an understanding of the whole process an engineer or programmer can relate to what impacts their work can have for an employee within another department in a downstream work task. By having a higher transparency between departments and regions, interviewees also state that coordinating actions to solve issues could become easier and quicker.

Interviewees that were located geographically far away from the case company's headquarters, highlighted the potential benefits of having a horizontal communications structure. This could allow them to influence the decisions taken centrally, without going through their local management hierarchy, which can take unnecessary time and sometimes result in skewed information. The interviewees further stated that it could increase their understanding of what happens within other regions, and provide them with information on certain decisions at an earlier stage. This could for example decrease the risk of having a customer informing a case company employee of an internal and important change.

A reoccurring issue during the case company interviews within all main processes was the lack of, or poor accuracy of, the sales forecasts. Adopting process management was said to have the potential of providing a better understanding of e.g. regional sales processes. It would then become possible to improve the sales process and establish performance indicators that enhance the accuracy of the forecast data. For example, one of the interviewees states that without measuring the loss of sales it is hard to keep track of the market focus. By receiving more accurate forecasts the organisation is enabled to better align its prioritisations, resources and competence with what is upcoming, sales-wise.

4.4.2 Process understanding

During several of the interviews the benefit of process management providing structure and defined processes were highlighted. It would not necessarily mean more processes, but rather that it would provide the means to manage the current processes and to understand how the work is actually carried out in the organisation. It was also said to potentially facilitate a reduction in the use of short-term and ad-hoc solutions.

Understanding the sales process

Experience from two of the group companies has given insights into the potential of working with mapping a sales process. At both of the companies the sales process was mapped out and measurements were started on sales, prospects, the loss of sales, and focus was put on their market participation rate.

This resulted in employees starting to realise that it was not the people but rather the process that was the reason for their lack of effectiveness within the sales process. A transition towards a more process-orientated mindset took. The sales processes' focus had gone from being inwards to being outwards, towards the customers, and by providing insight into what was in the sales funnel the accuracy of sales forecasts was increased, together with the sales volumes.

Process management is by several interviewees also seen as a way to structure and define the work roles so that there is less confusion on who should carry out a certain task, and who should not. Some processes in the company were seen as complex and technical, and thus having the process defined would help them relate their work with what creates customer value. It is also said that process management could enable coordination of process development with other regions, since they would be working in the same process structure.

Some interviewees further state that by standardising some processes, or parts of processes, the variations between regions, markets, and individual employees would decrease. This could ensure that customers and suppliers are met in a more uniform way. The Sales process was emphasised during many interviews to have big potential for increased face-time with customers and an increased efficiency in general, by structuring and mapping the process, and by improving the process using e.g. c*ustomer relationship management* and *sales process measurement*.

There is lots of potential for the Sales process to become structured, efficient and effective. By better understanding how work is done, and improving the way work is carried out, face-time with customers can be increased, which is believed to have a direct effect on the sales.

4.4.3 Resource utilisation

Interviewees connected the increased end-to-end focus achieved with process management with a higher resource utilisation. The increase in resource utilisation was primarily connected to improved transparency and communication in the case company expected to lead to decreased quality issues, less redundancy of the work, decreased sub-optimisation, and synergies by having all departments working together in the direction of the customer.

From the group's point of view, the company as a whole has much to gain from adopting process management. It will help to utilise the economies of scale that is possible by being part of a group, and by establishing standard processes the group is enabled to act as a single company with a common business language. By utilising the resources available in the group

interviewees state that a reduced redundancy can be achieved. For example, fifty IT systems can be reduced to three, affecting licensing costs as well as maintenance. By reducing redundant work, resources can become available to put on more value-creating tasks. Further, by using more similar processes in the different group companies, it is easier to benchmark the performance of a specific process and it better allows for adopting best practice approaches. In turn, best practice approaches make better use of the resources at hand.

4.5 The Risks with Adopting Process Management

The interviewees state several risks in going towards a more process-orientated organisation, and they can be categorised into two parts. First, the implementation and change itself could lead to unsettlements, disharmony, and high costs. Second, there are risks related to drawbacks of working more process-orientated. The different risks expressed by case study interviewees are presented in Table 8.

Table 8. *The risks with adopting process management at the case company, according to interviewees.*

Risks	Description
Resistance to change	Risk for high resistance to change due to previous successes and the nature of cultural change.
Top management attention	If top management commitment is not sufficient, the adoption probably won't succeed.
Process understanding	A lack of understanding of what process management is about can lead to a failed adoption.
Centrally driven adoption	If the process management initiative is driven too centrally, the process structure risks ending up without local adaptation.
Mandate and accountability	Lack of process owner mandate or accountability can seriously hinder the cross-functional impact possible.
Resources	Resource scarcity can hinder the case company from effectively adapting the process management initiative to its setting.
Administration and bureaucracy	There is a risk that the costs of the process management initiative outweigh the benefits achieved, e.g. due to creating a lot of administration.
Organisational complexity	For example, the matrix organisational structure could result in power struggles and dual authority confusion.
Measurements	There is a risk that one measures a lot, but forgets to prioritise on what is actually relevant.

4.5.1 Change and adoption risks

Interviewees stated that there is always a risk that the not-invented-here syndrome occurs during change projects. Even though the change could be seen as beneficial for a company it is initiated by an external part, in this case the company group, and this can create resistance. Interviews also highlighted a change resistance connected with the company being successful in the past, and thus larger changes might be more frowned upon and statements such as

“Why change something that works” might arise. Though, a few of the case company interviewees stated that due to the recent decline in sales volume, creating a sense of urgency should not be as hard as before. Generally, interviewees stated that the company tend to have a bit too self-righteous approach. One interviewee put it as “We think we are so good”.

Adopting process management was by some interviewees said to require the “killing of fixers”, who possess much experience, knowledge, and acts as problem solvers in the organisation. Since process management will aim at reducing the need for quick fixes, the role of the fixer will become excessive. Making this change is said to become very hard since the relying on “fixers” is rooted in the company culture.

Top management has an expressed “wait and see” approach, since a failed implementation would be too costly and waiting would decrease the risk of suffering from “childhood diseases”, since the other group companies would identify such “diseases”. Some interviewees state that being critical to new things is good, while being critical without even considering the possibilities of a change is dangerous. Interviewees state that top management currently delays the process management initiative in order to attend to more urgent issues, and that a reason for that could be that it is rather middle management that have seen the problems caused by not working more process-orientated. This is also the reason for why interviewees have stated that middle management is more committed to start the adoption of process management than top management. By not having attention from top management there are concerns among interviewees that the adoption will be hard to get started and to manage.

Interviewees emphasised that process management is seen as common sense by some employees, which could hinder the ability to create a sense of urgency for a large scale adoption as suggested by the directive. Another risk that was mentioned during the interviews was the risk of not having the process competence needed, or not being able to teach the employees the basics of process management well enough.

According to some interviewees it will probably take about 5-10 years before the positive outcomes become clear and visible, hence a lack of understanding for this timeframe can lead to great impatience among the employees and management.

The risk of the process management initiative being driven too centrally was mentioned by several interviewees. It was said that by not taking into account how the different regions or sub-processes actually work the processes created would lose their purpose, become unusable, and ultimately not become used.

Something stressed during interviews as a risk is if the process owners do not receive the mandate needed to affect all departments in their process, which would seriously limit the effectiveness of the process owner. This risk is said to exist due to the case company tradition of having a strong functional power. Interviewees also highlighted the importance of allocating resources based on the process, rather than on the functions, in order to achieve a

more process-orientated organisation. It was also said that the budget, or at least parts of it, will need to be put on the process if a decrease in functional thinking should be possible.

Several of the interviewees state that the employees currently possessing process roles rarely work with their process. This is seen to be because there are currently no clear responsibilities put on these process roles. If the right accountability and mandate is not established in the process, interviewees highlight that it become hard to understand what is expected, and hard to perform, and get approval for, changes affecting other functions than the own.

4.5.2 Risks in working with process management

Together with the process management directive there are also other directives, such as a directive forcing the group companies to tighten their costs. The resources within the case company are already scarce enough to limit the extent to which they can focus on a pre-study of adopting process management, without the possibility to acquire additional resources the project would face a significant risk.

Among some interviewees there is the belief that process management might cost more than it provides benefits, and that the case company's scarce resources can lead to it becoming necessary for an employee to possess several process roles.

One of the biggest fears that the interviewees expressed was the risk of process management becoming a large administrative project with no real benefits. For example, even if nice process maps are created, they will be of no use if they are never used as intended. There is also the risk of creating a too rigid structure in which too much bureaucracy arises, and the risk of process management creating additional work was brought up during several interviews. Some of the interviewees feared that they would not have the time to spend on working with processes, and that process management would mean something extra on top of the ordinary work tasks. One interviewee put it as "We already have enough processes; if any problems exists it is rather due to that the current processes are not followed".

Many of the interviewees expressed a fear for the processes becoming too standardised and administrative, and thus limit the flexibility of the work carried out. It has also been seen as something complex and boring including many definitions and roles. One interviewee put it as "Process management would not suit this department since we work with unique cases all the time". The IT aspect was also brought up, with regards to the risk of them becoming too big, rigid and costly. However, according to some of the interviewees the risk of cementation is easily over-exaggerated in an attempt to avoid changing the way one works.

The new organisational structure will be some kind of matrix structure, which implies typical problems related to matrix structures. Common risks emphasised by interviewees were; power struggles (sometimes not only on management level), two-man boss, duplication of resources, and doubling of time spent on meetings and communication. One interviewee emphasised the risk of power struggles becoming an obstacle for the adoption due to either the responsibilities between managers not being clear enough, or due to that the manager fails to set aside the own interests for the best of the process.

There is a risk that the KPIs created will measure what is visible, instead of what is relevant. As an example, sourcing KPIs such as “unit price” could get used instead of “landed cost”, which is the total cost after assembly. Interviewees also highlighted the risk of not establishing process-focused KPIs. If only functional KPIs are used and followed up upon by management, it would be very hard to motivate process work.

4.6 Critical Aspects in Adopting Process Management

During the interviews, opinions have diverged regarding the importance of becoming more process-orientated. Though, during most interviews the sales process was described as the process with the lowest process maturity. One interviewee stated that the sales process “have not even levelled out the roughest terrain”. It has also been expressed that “nobody really knows how efficient or inefficient the sales organisation is today”. Additionally, the opinions of how to best adopt process management differ. Some of the different opinions are:

- “**Start with the functions lagging** in process maturity. Then when a more balanced process maturity level has been reached, focus should be put on the other functions.”
- “The work should be carried out within **all processes at once**, and since all processes are equally bad a **big bang** approach is to prefer.”
- “Small iterative improvements in the form of **pilot projects** should be carried out **where the most impact can be achieved**. That is utilising the low hanging fruits in order to quickly show progress and to gain support.”

The areas interviewees stress as important for an adoption is presented in Table 9.

Table 9. *Critical* aspects *important for a process management adoption at the case company, according to interviewees.*

Critical adoption aspects	Description
Communication and education	Keep a clear communication with employees regarding the change. Education must be provided so that employees look upon e.g. process orientation and process management in the same way.
Engagement	Top management must be committed in order for the employees become engaged. Incentives for working with processes can be beneficial in order to overcome change fatigue and to keep the momentum of the change.
Governance structure	A governance structure will be important in order to e.g. coordinate the work across the different regions. Clear ownership will also be needed.
Resources	Additional resources will be needed, especially in terms of process competence and time. Additional resources could partly be solved by transferring competence from other parts within the company group. It will be important to provide time since changes take time.
Level of detail	Carefully assess what will create value for the company, and what will not, before the adoption is started, in order to decrease the risk of creating unnecessary work and rigidity.

4.6.1 Communication and education

The interviewees all stress the importance of having good way of communicating the change effort. Interviewees stated that management will need to motivate which processes we are working with and why, and that they need to make sure to integrate the regions in the work. The process owner will need to clearly motivate why he or she does each change, while functional managers need to respond with communication with the same clarity. It is also very important to reach a transparency between functions, for example an increase in workload in one function can give even bigger decreases in workload "further down the road", and thus be justified. This must be visualised by the process owner and the functional managers must understand the gains in order for them to accept it.

Interviewees also state that employees have a hard time relating to process thinking today. Many employees rather connect it with introvert process designers with flow charts, resulting in reduced head count and monotone work. Thus, there is an expressed need for a common view on process orientation in order for the employees to talk the same language. The process competence is by some interviewees said to not exist in the company today, but the view is that process competence will be crucial for an adoption and should be shared through education and workshops.

4.6.2 Engagement

Most of the interviewees thought that the first step of an adoption should be to create awareness of process orientation within the company; visualise, define and concretise

advantages and risks, especially among higher management. The adoption should be communicated in a fun and appealing way and change communicators should be used. Further, the adoption should be adapted to the conditions of the company in order to make it most beneficial for the business.

To further increase the commitment within top management, some interviewees state that a business case quantifying the business value of process management should be created. Further, a good strategy and structure to guide the work and governance unit must exist, and the company must have the right people and competence at the right positions. Another thing stressed by interviewees was the importance of describing the current as-is state and the future to-be. This is because it makes people understand what gap needs to be filled, what it takes to fill it, and what the gains would be to do so. By mapping the current state insights into how much time is put on e.g. solving issues can be reached, which interviewees state is not known today. In addition, if the costs associated with dealing with issues are quantified it is said that the willingness to change might increase as well.

A common statement among the interviewees was that the most effective way to get commitment is to have a committed top management. Today, parts of top management is said to be interested in process management but is said to never have communicated this in any of the meetings with employees. Interviewees further stated that even though the focus areas established are good in order to create commitment, it is important to not only delegating the work with the process management initiative to others, but to also commit to it yourself.

Some interviewees stated the importance of rewarding process work, and to celebrate the victories, in order to create and maintain commitment.

4.6.3 Governance structure

A more process-orientated way of working was said to incur a big change in decision-making within a process forum compared to in a function forum. Participants of process forums might become scattered geographically, while participants of functional forums usually are more co-located. This was said to possibly become hard to deal with initially. Further, the company has very autonomous regions, acting and driven almost as their own companies, e.g. in South America. A more cooperative work approach will be a big change for them. Or as one interviewee put it: “The functional managers will need to step out of their functional focus, requiring cultural changes in order for power struggles to settle”.

According to some interviewees, the biggest question is how the governance structure should look like and how it should work. In order to reach a healthy balance between processes and functions, dialogue and communication will be of importance. Interviewees stressed that first, a clear ownership should be established, and especially an ownership for the project being on track and becoming successful is needed.

4.6.4 Resources

Some interviewees state that more resources will be needed, especially within the Process & IT function, since this function mostly consists of IT expertise at the moment. According to an

interview about 90 per cent of the daily work is focused on IT and 10 per cent on processes. Process competence has been said to possibly exist in the organisation already, but due to a lack of transparency regarding the available skills, it is not known. In addition, interviewees have expressed that external process experts will probably be needed later on. One approach mentioned during interviews was to address the issue with scarce resources by utilising and moving resources from more healthy functions and processes within the company, or other companies within the group, and let them provide support to the less healthy functions and processes.

Since an adoption of process management was seen as a big change by almost all of the interviewees and would require a change in mentality and corporate culture, it was said that it will be important to remain patient and to provide enough time for the organisation to adapt. Besides providing time it is crucial that a long-sighted perspective of the change is communicated in order to address possible lack of patience.

Going from the mentality of fixing things and using ad-hoc workarounds will take time to change, and is generally seen as necessary to get rid of, in order to satisfy the demands from the industrial customers. The change mentality in the case company has, by some interviewees, been described as "we don't need to change anything" and "why change something that works". Even though the change in mindset is said to be on-going already it is seen to be too slow and irregular.

Though most of the interviewees have the above views on mindset and culture, some of the interviewees state that no real change in culture or mindset will be needed, and that the company is already willing to adapt to changes, thanks to the case company's small size.

4.6.5 Level of detail

During some interviews it was emphasised that one should avoid starting the adoption by establishing role descriptions, since that could limit later thoughts and options. Instead, one should start with what creates value for the customer, and then define how you achieve this customer value. When an understanding of what creates value for the customer has been reached, role descriptions and accountabilities can be decided upon.

Interviewees also stress that the adoption should carefully consider and evaluate what actually will become beneficial for the case company and what will be favourable to remain unique. In some cases the current way of doing it could be the best way to create business value.

4.7 Synthesis

The main potentials, risks and critical adoption aspects found during the case study are presented in Table 10. For more details go the table in the corresponding section.

Table 10. *Potentials, risks, and critical adoption aspects according to the case company interviewees.*

Potentials	Risks	Critical aspects in adopting
- Customer focus. - Cross-functional understanding. - Understanding of the daily work. - Resource utilisation. - Clear processes.	- Resistance to change. - Top management attention. - Process understanding. - Centrally driven adoption. - Mandate and accountability. - Resources. - Administration and bureaucracy. - Organisational complexity. - Measurements.	- Communication and education. - Engagement. - Governance structure. - Resources. - Level of detail.

5 BENCHMARKING STUDY

This chapter concerns data gathered from a benchmarking study conducted at Skaraborg's Hospital Group, who has experience from transferring into a process-orientated organisation. Its findings derive from interviews and internal documents. The information presented derives from the interviews, if not explicitly stated otherwise.

5.1 Introduction to the Benchmarking Organisation

The benchmarked organisation is a hospital referred to as SkaS. The hospital is present within four cities and employs about 4000 employees, of which the benchmarked hospital site employs about half of these employees.

The hospital started adopting process orientation early, compared to other hospitals in Sweden. When the Swedish government introduced a maximum limit for how long queue times that were allowed for the patients, the hospital realised that they needed to change the way they worked. They believed that by working from a holistic end-to-end perspective with the patient in focus they could increase both the efficiency and the effectiveness of the organisation. Beside a decrease in patients' queue times, it was believed that an increased process orientation would also mean a decrease in throughput times, increase the quality of the care provided to patients, and that it would enable them to become more aware of how they work.

SkaS has been working actively with adopting process orientation since 2004 and, much thanks to having a Development director experienced within the field of quality management, the adoption was managed by expertise in the field. Early on, they also hired external consultants to provide SkaS with experience on the topic and from other adoptions. Although the process work started in 2004, it took until 2010 before the adoption of it wide-spread.

Since the hospital is governmentally funded the developmental possibilities are limited by national guidelines that state how the medical care should be provided, as well as by scarce resources due to financial constraints. This means that they have not received any extra resources to facilitate the adoption of process orientation.

5.2 Organisational Structure

The benchmarked hospital used to be very functionally orientated, but has a more process-driven structure today. The organisation is governed by a hospital director. Beneath the director there are support functions such as the office for information and registry, human resources, finance, development support, and R&D. There are four area managers reporting to the hospital director, and their hospital areas include a number of activity areas. Most of the activity areas correspond to a medical field.

SkaS organisation for process work consists of different roles and groups. In Table 11, each role and group is described.

Table 11. *Process roles and groups, gathered from SkaS (2011).*

Role	Responsibility	Ownership	Appointed by
Commissioner	Appoints process owner and a steering committee when creating a process.	The hospital director (higher level process), or the area manager (area level process).	Senior management.
Process owner	Makes critical process decisions, ensures process outcomes, provides the resources needed. Develops, monitors, and continuously evaluates the process development plan and the capabilities of a process.	Most often the activity area manager.	Commissioner.
Steering committee	Makes critical process decisions, ensures process outcomes, provides the resources needed. Deals with conflicts arising betwen process and functional interests.	Managers in charge of the resources and functions needed to reach the process outcomes.	Commissioner.
Process manager	Coordinates the operative parts of the process, at the process owner's behalf. Initiates and leads the improvement and safety efforts, based on the development plan. Makes sure education and support to process personnel is provided.	Someone in the process with the skills, experience and commitment needed, and who has the process owner's trust.	Process owner and Steering committee.
Competence support	Provides individuals and whole improvement projects with the expertise and skills needed for continuous process development. Directs the work in larger improvement projects, and supports the creation of the process development plan.	External recruitment or personnel with process orientation skills.	Competence support manager.
Process group	Establish a holistic and end-to-end perspective. Engaged in process development work, documents results, and educates and supports process users.	Consists of employees from all functions involved in the process.	Process owner.

Notable is that the process orientation adoption was carried out without any extra financial resources, and e.g. the process roles and process groups were employed by people already working at the hospital.

5.3 Managing the Processes

In order to achieve the desired outcome and keep developing the processes, it is important to manage and improve them. Depending on the characteristics of the process SkaS uses different approaches for the improvement work (SkaS, 2008). Processes that include large number of patients and where the treatment and goals are similar in every case are seen as permanent and repetitive processes, and this is the most common type of processes at SkaS. SkaS manage and improves these processes by using a balanced scorecard, consisting of four perspectives; *patient, process, employee/learning,* and *financial perspective* (SkaS, 2008). For each perspective a number of measurements and goals are established. It is important that goals and measurements are based on the criteria of the process and support an end-to-end

perspective. The goals are then divided into sub-goals and critical success factors, which all interact to comply with the end-to-end view. The measurements can be used to substantiate the achieved improvements in processes (SkaS, 2011). The processes should be followed up and evaluated from the four perspectives presented in Table 12. This should be done three times a year and the process development plan is then assessed and updated.

Table 12. *Purpose and goals of the four perspectives, gathered from SkaS (2008).*

Perspective	Description	Measurement Examples
Patient	How value for the patient is created? How the patient views the organisation? Provide high care with minimised waiting times!	95 % of all patients should be satisfied with their visit. Maximum queue time for 80 % of the patients should be 3 hours.
Process	How can the quality of care be ensured and improved? Avoid internal barriers by keeping a transparent communication!	The number of wound infections should be 3 % or less. The number of surgeries/month should not go below 20.
Employee and learning	How are the employees developing and how engaged are they? What competency and leadership is required to reach the vision? Become an attractive hospital with high employee involvement and development!	90 % of the employees should find the process support provided to be good. 100 % of the employees should improve their skills according to the development plan.
Financial	How efficiently and effectively are the resources utilised? Aims to visualise the financial condition of the organisation!	Cost per patient in the process should decrease by X SEK. Number of patient visits should increase by X %.

The cornerstone model by Bergman and Klefsjö (2010) is used by SkaS as a foundation for their management system. By conveying the model they have made sure that all employees understand where their focus lies. The model covers*; focus on customers, focus on processes, improve continuously, base decisions on facts, let everyone be committed*, and *top management commitment*. SkaS has also chosen to include a seventh focus, create a holistic view. The holistic view refers to having coordinated processes that together maximise the value created for the patient and their families. See Figure 4 for an illustration of SkaS modified cornerstone model.

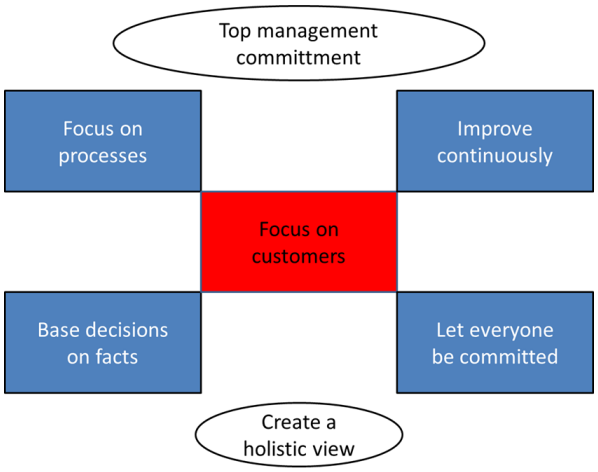

Figure 4. *The cornerstone model, Bergman and Klefsjö (2003), adapted by SkaS (2008).*

In making a process permanent and in managing continuous process improvements, SkaS uses a model referred to as *the 10-step model for process development*. The model can be broken down to four main phases (SkaS, 2008; SkaS, 2011), presented in Table 13.

Table 13. *The 10-step model for process development at SkaS (SkaS, 2011).*

Step	Purpose
Define Step 1, 2	Define the process and appoint process roles. Answer questions such as who it creates value for and where the process starts and ends.
Improve Step 3 - 7	Aims to find out how to change the process. The need for change is defined, measured and demonstrated. When the need for change is identified possible solutions are analysed, and the best one is selected. At last the selected solution is standardised.
Establish development plan Step 8, 9	Establish a process development plan, and ensure management continuously reviews the plan and that it is included in the company's scorecard.
Follow up and improve continuously Step 10	Continuously improve the process, and base the improvements on the development plan. Try to compare the process to best practice.

5.4 Process Maturity

The views upon process orientation are very similar among the interviewees. There is a mutual understanding that process orientation is to work from the patient's perspective. A common way to put it is "How can we make the time at the hospital as convenient as possible for the patient, and how do we need to work to achieve that?". Process orientation is also seen as a way to standardise and ensure that the quality of care provided does not vary with where or when it is given. The process maturity level is seen to vary between processes. Departments that started early with their process orientation adoption, are more mature than departments that started their adoption more recently.

Although interviewees state that the process knowledge within SkaS is relatively developed, they have had troubles to find an effective method to measure the performance of processes. While the interviewees state that they have witnessed many improvements since they adopted process orientation, they have few measurements proving it. This is said to be one of their

biggest improvement areas ahead, and it is said to partly derive from the IT systems used being limited in terms of extracting data. One of the processes seen as good at using measurements has successfully included measurements related to e.g. employees and learning in addition to the ones focusing on the patient. Examples on measurements related to employees and learning can be found in Table 12, and includes that 100 per cent of the employees should improve their skills in accordance with the development plan.

As previously stated, every process has its own process group including a process owner, a process manager, and process members. The process owners usually get to decide who should be included in the process group. Each member of the process group and steering committee is required to at least have attended the basic process training, of two days, given by the hospital (SkaS, 2011). Additionally, the interviewees state that process managers should have a *Six Sigma Green Belt* education as well as a basic *Lean hospital* education, and at least one member of the governance group should have a *Six Sigma Black Belt* education.

The majority of the employees have a basic understanding and knowledge of the process inputs and outputs, of who their process owner, process manager, and process team members are. Though, there are still some employees that are not fully familiar with all the roles used in their process.

The documentation of processes is said to be seen as an important step to ensure stable process performance. All processes should be documented on an intranet page dedicated for processes and the information about the processes is generally up-to-date. Though, an expressed area for improvement is the process users' infrequent use of the documented data, which was said to mostly derive from a lack of understanding for the benefits of its use. Thus, it is mostly the employees working more actively with the process development that frequently access the documented data. The area manager makes sure that processes are documented and demands the use of the same, but it is the members of the process group who are responsible for updating the documents. The information that is documented includes what activities are carried out in a process and who has the responsibility of what activity. The information is today mainly used when an employee wants to understand how a certain process is performed and when process improvements are carried out.

According to the interviewees, the general employee did not see the benefits to begin with. Common reactions were "How should we have time to work with this also?" It was emphasised during the interviews that by conveying that process mapping on its own will not result in any improvements the employees might have an easier time understanding the broader picture.

5.5 The Benefits Achieved with Process Orientation

It has been some years since SkaS started working with process orientation. The views expressed today are that the processes have become a natural part of their work and that nobody really misses the way they worked before. The organisation is governmentally funded

thus there is no pressure to deliver profit, and no additional financial resources were provided for the change. Hence, the costs have been in the form of time dedicated for process work and educations, such as within Six Sigma and Lean. In general, the patients' waiting times have decreased (see Figure 5), and the quality of the care provided and the patients' satisfaction have increased, with no additional resources added.

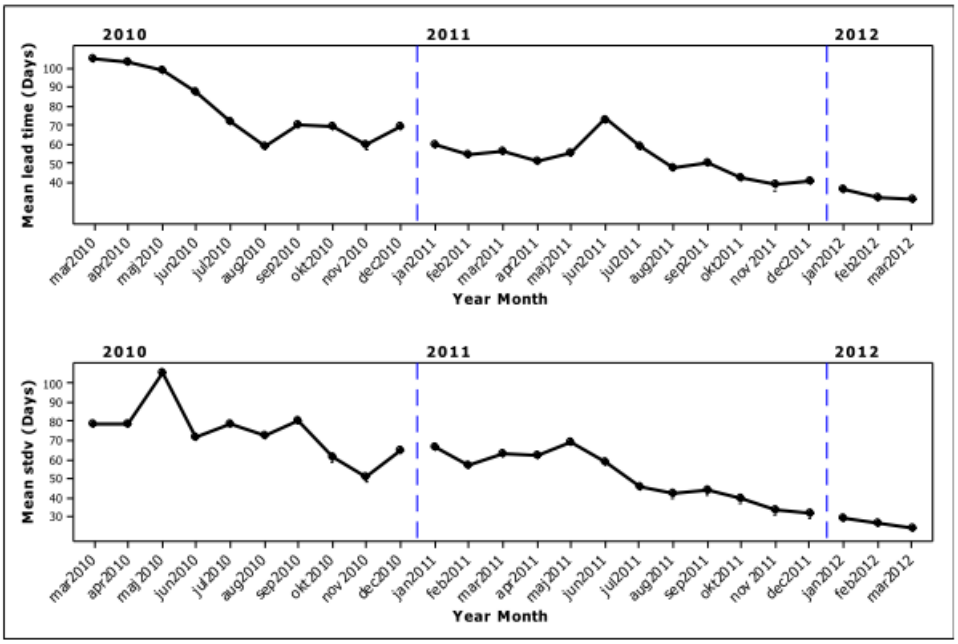

Figure 5. *Mean lead time, with standard deviation, for treatment at SkaS (Plantin & Johansson, 2012).*

The process-focus has benefited both the patients and to some extent their families, the employees, and the management at SkaS. The degree of process maturity in the hospital is still at different levels, thus the processes have experienced different amounts of issues and benefits. However, it should be highlighted that it is not possible to explicitly state that the benefits achieved is related to the process orientation, other improvements might have affected the results as well.

One of the key benefits achieved at the benchmarking organisation was increased transparency between functions and towards the patients, and that the understanding of the patients' needs became common for all employees. For example, the employees thought they had a high degree of patient focus and fact-based decisions, however, it was not until they included the patients (or their parents) in the child diabetes process that they actually understood what their patients desired.

For more information on the benefits achieved at the hospital, see Table 14.

Table 14. *Achieved benefits at SkaS associated with working process-orientated.*

Patients	Employees	Organisation
- Shorter queue times. E.g. Mean lead times for treatment reduced from 110 days in March 2010 to 30 days in March 2012 (Plantin & Johansson, 2012). - Higher quality of the care (both in expressed patient satisfaction and in medical values). - Better information and knowledge up-front. - Fewer patient injuries. E.g. Number of pressure sores decreased from 17,6 per cent in 2011 to 10,5 per cent in 2013 (SkaS, 2014).	- Better understanding of what happens in other functions - Less sub-optimisation and less duplication of work. - Now able to influence how they work more easily.	- Higher resource utilisation (no more resources are used today but the value provided to the customers is greater. - The work is now improved in a continuous manner and the customer is more included in the development work.

5.6 Critical Aspects in a Successful Adoption

During the adoption of process orientation the hospital has had frequent iterative evaluations and discussions about what was successful and what could have been done better. Each iterative cycle provided insights into critical success factors occurring during the adoption, and could thus be used as a guide for the next iteration. The insights were divided into three areas; preparations, commitment and engagement, and knowledge. The areas are presented in Table 15.

Table 15. *Critical aspects in a successful adoption, according to benchmarking study interviewees.*

Critical aspect	Description
Preparations	- Create at sense of urgency, which should be created through facts. - Establish a cross-functional change team, including different professions to bridge rivalries. - Prepare a project plan with goals and a time frame and make sure enough resources are provided. - Let everyone interested be involved and influence the project, and ensure the goals and vision makes sense for employees.
Commitment and engagement	- Managers and process groups needs to be commited and responsibility should be delegated to all involved in a process. - A key was to have one committed doctor, which then spread engagement and understanding to other doctors. This was especially important since the doctors were less convinced about the need for working process-orientated to begin with. - Successes should be celebrated, where the individual employee is recognised and rewarded. - Positive examples should be shared across the organisation. This is e.g. done during the annual quality days. Important is to use different ways of conveying the achieved progress, since different individuals understand by different means (e.g. quantitative vs qualitative).
Knowledge	- The right knowledge must exist in the organisation. - The hospital provided education for all employees, in terms of excercises within the process groups. - Feedback was given to teach, not to judge and performance indicators were used to show how a change had actually impacted the performance.

In order to successfully carry out a change project it is important to consider the magnitude of the change and the actual work needed. In Table 15, it can be seen that a willingness to change must be created and that resources, such as time and knowledge are critical. One way to decrease the change resistance was to emphasising that process orientation is nothing extra, rather it is a way to structure and enable continuous improvements to the system. In general, the interviewees valued engagement higher than specific knowledge and dissidence should be encouraged. In order to reach long-term effects continuous commitment is necessary, as well as, continuously controlling and aligning the effort with the intended path.

5.7 Common Issues and Lessons Learned

Looking back on the adoption, the interviewees provided several issues that occurred and lessons learned. According to the interviewees, common issues include lack of; top management commitment during early phases, top-down approach, mandate for process workers, and of a common view on process orientation among employees.

In order to create attention, awareness, and long-term engagement for the adoption, the interviews saw top management commitment as the most important factor. However, in the beginning top management was not committed enough, which interviewees see as unfortunate

since it is believed that the effort would have been more structured in such a case. Top management could show commitment by e.g. “walking the talk”, frequently asking questions, showing their interest, and by continuously paying attention to and following up on its progress. Besides being engaged and result-orientated, the managers should actively delegate responsibility for the process improvement work.

The adoption was not carried from a clear top-down approach, which interviewees argue resulted in unbalanced process maturity between different processes, as well as reduced the speed of the adoption.

The interviewees stated that power struggles between functional managers and process owners have been an issue, and that the struggles most often have derived from the steering committee and the process groups having different views, or from insufficiently defined areas of responsibilities. Clearer areas of responsibilities and more mandate for process workers is seen as a way to reduce these power struggles.

Measurements were seen as important by the interviewees, in order to measure progress of the effort. Still, interviewees argued that the organisation lack several measurements. It is critical to measure the current state before starting the effort in order to provide quantitative proof of progress. Interviewees expressed the need to make sure that process measurements become as important as functional measurements. By having more accurate measurements the data from the measurements, in addition to other facts, can be used to better base the decisions on facts. Include your customers when it is possible, in order to understand what is actually valued.

Interviewees highlight that management should provide the time needed for employees to dedicate time on process development work, and avoid to get too detailed in the process mapping since it will waste a lot of time, which occurred the first time mapping was carried out. Furthermore, it is important to make sure that employees actually use what is documented and defined, which has been seen as an issue at the hospital. In order to make the most out of the time in the process development groups, they should not be too big. Groups of four to five persons have turned out more suitable than groups of eight to ten, at SkaS.

Try to avoid the not-invented-here syndrome by including members of different geographical locations and professions in the process group. Then continuously focus on the whole since the focus otherwise will turn into functional thinking.

5.8 Synthesis

Based on the benchmarking study, main potentials, risks, and critical aspects in an adoption have been identified, which are presented in Table 16.

Table 16. *Potentials, risks, and critical adoption aspects, according to benchmarking study interviewees.*

Benefits achieved	Issues experienced	Critical aspects in the adoption
Patients: - Patients' queue times have decreased. - Increased quality of the care. - Increased patient satisfaction. - Better information and knowledge provided to the patients up-front. - Fewer patient injuries. **Employees:** - Better understanding of what happens in other functions. - Less sub-optimisation and less duplication of work. - Now able to influence how they work more easily. **Organisation:** - Higher resource utilisation. While no more resources are used today, the value provided to the customers has increased. - The work is now improved in a continuous manner, and the customer is more included in the development work.	- Lacked a clear top-down approach. - Initially lacked clear process mandate and a common understanding of process orientation, resulting in power struggles. - Hard to find effective ways of measuring the performance and the achieved improvements of the same. Partly due to unsupportive IT systems. - Infrequent use of documented process information, such as process maps. - The not-invented-here syndrome occurred between regions, as well as between functions.	- By connecting process measurements and targets to the organisation's balanced scorecard, and by using a 10 step model for improving processes, continuous improvements are enabled. - A common understanding of process orientation has been established, enabling a thorough patient focus and understanding of the process work. - Consistent communication together with education was important for the employees to understand the reasons for process orientation, to begin with. - Recommended preparations up-front of an adoption include; creating a sense of urgency, communicating a project plan with well-defined boundaries, and allowing interested and engaged employees to participate in the project. - Top managements' commitment, together with a clear top-down approach, is seen as an important aspect, together with having the right mandate to drive process work. - Important to make process measurements as important as functional measurements, and to measure from the beginning in order to be able to demonstrate achieved improvements. - Avoid too detailed and time consuming process mapping. Rather use an iterative approach to mapping processes. - Establish cross-functional process teams to overcome departmental boundaries.

6 ANALYSIS

In this chapter the empirical findings from the case company are reviewed and analysed. First, an analysis of the organisation's current maturity level for adopting process management is carried out. Second, the potentials and risks related to process management and its adoption at the case company are elaborated upon.

6.1 Current Process Maturity

In Figure 6, the case company's current state has been translated into a measure of how ready the organisation is for adopting process management. The analysis is carried out using Hammer's (2007) Enterprise Maturity Model from the PEMM, and red areas highlight areas for improvement. See Appendix 1 for the full version with the requirements for each area, and see Section 3.1.4 for information on how the analysis was performed.

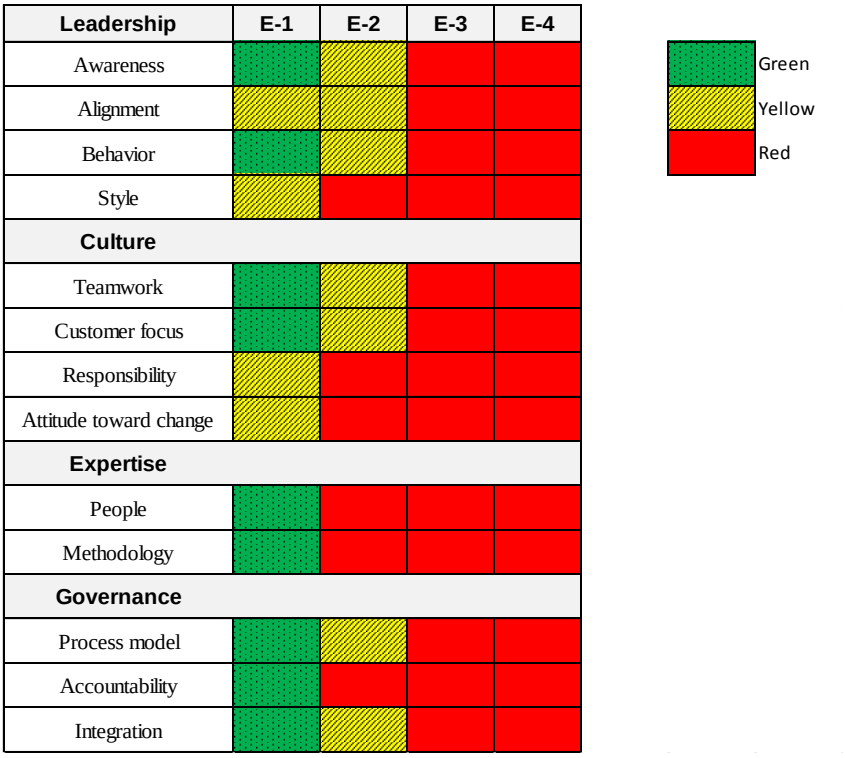

Figure 6. *The readiness for adopting process management at the case company.*

Figure 6 illustrates, based on all the red boxes, that the organisation is generally immature in terms of working with processes. However, for the first level, E-1, there are four areas limiting the move towards the next level of process maturity. The organisation should according to Hammer (2007) focus on improving these areas, by following their prerequisites as stated in Appendix 1. The areas impeding the case company from moving to the second level, E-2, are for the category of leadership: *alignment* and *style;* and for the category of culture: *responsibility* and *attitude towards change*.

The alignment of the leadership is limiting a process management adoption at the case company. In order to fulfil the first level, E-1, the leadership of the process management initiative should be put on middle management. According to the case study the accountability and efforts made in the field of process improvements are carried out by middle management. However, the efforts are not part of an overall process program, but rather detached initiatives.

The current leadership style does not fully match the prerequisites needed to fulfil the E-1 level. Hammer (2007) defines the prerequisites for the first level to be that top management should use an open collaborative style. Case study interviews show that there is a lack of top management communication regarding the process management initiative, the lack of communication has been especially apparent with regions located far away from the headquarters.

The cultural responsibility needs to be improved in order to reach the first level, E-1, which means that the accountability for results should rest with managers (Hammer, 2007). In the company today the results rest with managers, however the results are solely functional.

The attitude towards change is limiting the adoption of process management in the case company. To fulfil the first level, E-1, there should be a growing acceptance for the company's need to change (Hammer, 2007). Case study interviews show that previous success together with the fact that the company is still profitable, has hindered some employees from adopting a positive attitude towards change. However, some interviewees believe that the recent financial recession has given employees a slightly increased understanding for the need for change.

The results reveal that the categories limiting a process management adoption at the case company the most are leadership and culture. The benchmarking study emphasises the importance of top management commitment and engagement in order to get long-term success. Searle (2011b) argues that it is necessary to keep a clear communication with employees about the process management initiative in order to avoid underestimating the adoption. In regards of the culture, the past success of the company could make the change resistance more difficult to overcome. This is supported by Nystrom and Starbuck (1984), and Kets de Vries and Balazs (1999) who highlight that if employees have experienced previous success it is especially hard to change their way of working. Additionally, the current culture supports the use of fixers (Kennerfalk & Klefsjö, 1995), who according to interviewees are hard to convert.

6.2 The Potentials of Process Management

The case study highlights problems and areas for improvements within the case company, which could be covered through the adoption of process management. These problems and improvement areas have been clustered into areas of key potentials seen in Table 17.

Table 17. *The potentials of process management at the case company.*

Area	Potential
Decisions based on facts	- End-to-end measurements enabling more decisions to be based on facts. - Increased use of facts will decrease the risk for the wrong decisions being made.
Manageability and alignment	- Enables staff to be transferred to where they will create the most value for the business. - Quicker reaction and alignment to external and internal changes in demands. - Individual and organisational learning is facilitated by the continuous improvement focus of process management.
Communication	- Less miscommunications and fewer hand-over problems. - Decreased departmental boundaries through the common customer focus. - Decreased risk for knowledge remaining isolated. - Less pressure on vertical communication channels through creating a horizontal communication structure. - Less distortion of information, through using shorter communication paths.
End-to-end awareness	- Increased cooperation with customers and suppliers. - Increased understanding of customer demands. - Increased market and regional presence. - Better understanding of what competence exists in the organisation. - Increased understanding of what happens in other functions. - Understanding of how ones work relates to what happens in other parts of the organisation.
Resource utilisation	- Decreased re-work and redundancies. - Decreased cost of poor quality. - Alignment with the company group will result in decreased redundancies, enhanced coordination, and better facilitate economies of scale. - Alignment with the company group will enables transferring of competence and support.

6.2.1 Decisions based on facts

By working process-orientated it is possible to naturally incorporate measurements of the company's performance (Armistead & Machin, 1997), although one should not forget to actually connect the measurements to the processes (Kronz, 2006). Further, effective measurements are central for an organisation in order to continuously improve (Armistead & Machin, 1997; Kaskinen, 2007). This suggests that adopting process management would enable top management to manage the organisation and base their decisions on more data, taking into account both end-to-end measurements including the customers and current functional measurements. For example, by being able to measure horizontally throughout the

case company it is possible to better quantify the total costs of poor quality, since such costs are seen in several functions of the company.

To ensure that decisions are based on facts and that the importance of that is understood among the employees the benchmarking organisation used the cornerstone model (Bergman & Klefsjö, 2010) as a foundation for the process management adoption. In addition, they used their balanced scorecard to align their process work with the strategic goals of the organisation. At the benchmarking organisation a higher degree of decisions based on facts increased resource utilisation, in terms of reduced double work and less sub-optimisations. Furthermore, by basing more decisions on facts, the risk for making biased and misinformed decisions is decreased, and it will be easier for the case company to maintain the previous success factor of making good prioritisations.

For example, the KPIs used in the organisation and their target levels, have poor anchoring with the internal and external customers of the company, which has led to sub-optimisations and to an unnecessary need for estimations and predictions. The benchmarking organisation realised that by including customers in the process they managed to understand what the customers actually appreciated.

6.2.2 Manageability and alignment

The case company is at times seen, according to interviewees and surveys, as a relatively bureaucratic, slow, and change-reluctant organisation. By adopting process management an organisation can become quicker in reacting to changes in the business environment, which can be seen as important in order to respond to today's fiercer business environment (Kennerfalk & Klefsjö, 1995; Lee & Dale, 1998; Searle, 2011b; Pritchard & Armistead, 1999). However, some argue that a purely process-orientated structure reduces specialisation and economies of scale (Legerer et al., 2009; Kennerfalk & Klefsjö, 1995), thus a balance between a functional and a process focus is preferred.

A case company organisation that is quicker in responding to changes in the business environment would be beneficial, since it would allow for better and faster alignment to the different regions' and customer segments' demands. This is also facilitated by having a horizontal communication channel.

Benefits like increased alignment and common focus were experienced at the benchmarking organisation. The end-to-end view provided each individual with a common focus on the customer and a better insight into the work of other departments. The benchmarking organisation also experienced an increased cross-functional transparency, making it easier to move resources. The possibility to move resources could be of great value for the case company since it would open up the possibility to use resources from the rest of the group. A possibility to move resources also has internal benefits since the business is partly seasonal and therefore enables the company to transfer employees to other parts of the organisation during off-seasons. The lower barriers for transferring personnel across group companies

could also be seen as a risk, since competence could be transferred away from the case company as well.

Additionally, interviewees argue that a more aligned company group e.g. would lead to the possibility of reducing redundancies, to better learn from the others, and to benefit from economies of scale. For the case company, this could be connected to a clearer accountability and to individual employees getting a better understanding of what work is performed elsewhere in the organisation. The benefits achieved on a group level would benefit the case company as well, e.g. in terms of a reduced number of IT systems, a common corporate language, and a more predictable output.

The case study shows that the documentation of processes that is available is limited and that learning across departments and regions is not emphasised, apart from what takes place within some projects. The benchmarking organisation has tried to solve this issue by including individual learning as something measured and followed up upon. Having an effective model for individual learning helps opening up the possibility to achieve organisational learning (Tsang, 1997). While a project can be cross-functional, the difference with process management is that it allows knowledge to be shared across the whole organisation and not only within a project and it further allows continuous improvements to take place.

6.2.3 Communication

In the empirical study there are several examples of miscommunication and hand-over problems, of which most problems occurred in functional boundaries. For example, there are clear communication problems between departments when a new product is launched, and uncertainties of who should cover the aftermarket support when a product is used in a different region than it is sold within. Process management is an effective method to use for solving issues related to poor communication between functions (DeToro & McCabe, 1997). This is supported by the benchmarked organisation that saw a decrease in barriers between functions and professions, as well as an improvement in the general communication, thanks to a common focus on the customer. Improved communication between functions enables the organisation to fulfil its goals and align with the customer focus (Kennerfalk & Klefsjö, 1995).

Knowledge within the case company is often said to be possessed by individual employees and managers, where the knowledge usually becomes isolated. Some employees refer to it as "knowledge stored on isolated islands". The isolation causes miscommunication which has made it hard to understand what other employees are doing and the responsibilities they have. Miscommunication enhances the risk for sub-optimisations, improvisations, and variations in the daily work (Kennerfalk & Klefsjö, 1995; Hammer, 2002), something that is seen among the employees as well who blame reworks and waste on poor communication.

The benchmarked organisation decreased their isolation of information and poor communication by including relevant professions and regions in cross-functional process groups, so that the information became more wide-spread. Furthermore, a more process-

orientated company increases the horizontal information flow and shortens communication paths, which reduces the pressure put on vertical communication channels (Kennerfalk & Klefsjö, 1995). Thus, through using a horizontal communication structure more frequently, the employees will be able to affect and improve their daily work and processes without escalating it vertically. In turn, this decreases the risk for information becoming distorted and decreases the amount of information needed to be processed by management.

6.2.4 End-to-end awareness

The case study provides examples of a lack of transparency between external stakeholders, such as customers and suppliers, and the case company. Some customers are reported to experience that the company provides the products that are not suitable for the customers, that the company is complicated to do business with, and that customer problems are not solved quickly enough. The reason for that could be explained by not having a direct customer feedback channel and an end-to-end accountability for customer problems. This is said to increase the risk for misunderstandings, biased interpretations, and customer issues falling into departmental cracks.

Kennerfalk and Klefsjö (1995) state that a higher degree of process orientation enables increased transparency, including the cooperation with suppliers and customers. The benchmarking organisation shares this view, and admits that it was not until they actively included the customer in the process work that they realised and measured what the customer actually needed and appreciated.

Lately, the company has performed a change in what customers they target, where more demanding industrial end-customers are focused upon today. Some interviewees were well-aware of the change and the new demands in quality that comes with it, whereas other interviewees did not mention this change in demands. A more process-orientated view has, for the benchmarking organisation, led to a better understanding of what matters to the business. The employees at the benchmarked organisation now ask themselves how they can make the patient's time at the hospital as convenient as possible. If the case company would have a better understanding of the new stricter quality demands set by industrial end-customers, the employees would easier realise the need for quality improvements.

Many interviewees believe that more process competence will be needed in order to carry out the adoption of process management in a good way. Some interviewees state that the competence already exists within the company, but that the lack of transparency between functions and into other employees work has made it difficult to identify where that competence can be found. The empirical study also reveals that the lack of cross-functional transparency has created difficulties in identifying, solving and understanding problems that include many functions, and that there is little insight among employees in how an increase in workload for one function could give an even bigger decrease in workload for another function. The benchmarking organisation also witnessed that process management gave the employees a better understanding of the process inputs and outputs, how their work relates to others', and how they create value to the customer.

6.2.5 Resource utilisation

Several of the interviewees state that the case company generally struggles with double work and that plenty of time is spent on fetching information from other departments. Interviews further show that the company needs to better utilise the resources and competencies they already possess. Interviewees at the benchmarking organisation state that process orientation is an effective mean to improve the utilisation of resources, e.g. in terms of decreasing double work and in decreasing throughput times for the patients. In turn, the workload for some employees is reduced who then create value through working on other tasks instead.

The process-orientated work at the benchmarked organisation has provided the employees with a better understanding of what happens to the patient up- and downstream, which resulted in an overall improved resource utilisation. That is in line with Kennerfalk and Klefsjö (1995) who highlight that a more transparent organisation could reduce the risks of redundancies. However, the benchmarking organisation is not driven by profit, thus the case company has a higher pressure for short-term financial winnings.

6.3 The Risks with Process Management

The theoretical framework and the empirical data have brought attention to potential risks with adopting process management. Together with possible ways of reducing them, the risks are grouped into sub-headings as seen in Table 18.

Table 18. *The risks with process management at the case company.*

Area	Risk
Poor adaptation	- Fail to adapt the process management directive. - Lack of regional and market adaptation. - An additional layer of processes. - Extra administration takes time off the actual work. - Creative and innovative capabilities are decreased.
Complex authority structure	- Power struggles. - Dual authority confusion.
IT-related problems	- New IT systems limiting the work, by being too rigid and unsupportive. - The system with process mappings/roles/etc. is not being used.
Lack of competence and understanding	- Lack of understanding for process management among employees. - No process competence centre to support process efforts.

6.3.1 Poor adaptation

The case company has received a directive with general guidelines for the design of the process management initiative. Case company interviewees have expressed the need for adapting this directive to the case company, since it is considered to be different from the other companies in the group. If the initiative is not adapted interviewees fear that it will not increase the business value, and rather just become a burden for the less resourced case company. This is supported by Pritchard and Armistead (1999) who stress that process management needs to be adapted. The need for adapting is highlighted by case company interviewees who express that regions and market units sometime lack insights into what happens at the case company's headquarter. Thus there is a risk that the process management initiative will lack local adaptation. The same worries have been expressed within the case company's headquarters, but with regards to what is decided on the company group level.

Interviewees have stated the risk of process management creating an additional layer of processes with extra administration stealing valuable time off the actual work. Nilsson (1999) states that processes should not be created on the lowest levels, since it would decrease the flexibility and the end-to-end perspective would easily be lost. That view is shared by Benner and Tushman (2003) who argue that focus on efficiency and reduced variations within processes management could hamper innovative and creative capabilities of an organisation. Furthermore, the benchmarked organisation carried out a too detailed level of process mapping that was not adapted to the organisation, which consumed plentiful resources without creating any value. However, Kennerfalk and Klefsjö (1995) argue that a correctly designed process-orientated organisation provides better focus on work that is value-adding for the customer.

6.3.2 Complex authority structure

Some interviewees have highlighted the risk with matrix structures, where functional and process mandate needs to be carefully balanced in order to minimise the risk for power struggles and for employees getting confused on what manager to listen to. Since the case company has been functionally orientated for a long time, any shift in power would generate intense discussions. Kennerfalk and Klefsjö (1995) put it as managers will need to go from acting like "heroes" in the functional setting to become more like coaches in the process-orientated organisation.

The interviewees at the benchmarking organisation acknowledged that power struggles had been an issue for them, but thought of it as a normal part of all larger change projects. By having committed and engaged top management and by having the necessary skills in place they believed that the power struggle issues had decreased. They were further satisfied with having a steering committee in each process responsible for solving power struggles. The committee most often consists of the managers in charge of the resources required along the process.

Willaert et al. (2007) and Lee and Dale (1998) stress the need of having a governance structure in place enabling management to be organised in the right way, and that an

appropriate balance between horizontal and vertical focus is found. Dangot-Simpkin (1991) argues that by e.g. having an up-front communication and acknowledging potential conflicts in advance, challenges with the authority structure can be tackled. Case company interviewees stress that that the risks of creating a complex authority structure can be decreased by having clear accountabilities and responsibilities.

6.3.3 IT-related problems

Recent efforts to update the IT infrastructure in the case company has been made, e.g. within the Production and delivery process, where old systems has been replaced. Interviewees have stated that due to the system chosen being too rigid, plentiful of problems, annoyance, and costs has arisen. It has further created extra administration, e.g. in terms of employees needing to carry out several extra steps that do not add value, but rather just need to be done in order to please the IT system. It is not until today employees are starting to see the benefits of it, although much can be learnt from it which can be utilised for similar and upcoming replacements in the company. Nevertheless, this example shows the risk of integrating a misaligned and too rigid IT-system to the adoption.

The case company uses a system for providing employees with access to process descriptions and process maps of the four main processes and in varying degree also to their sub-processes. Interviews have shown three main problems with this system. First, there is a lack of understanding to why they should use the system. Second, the information provided in the system is often not updated or does not correspond to the way they actually work. Third, no one really asks for the information stored there.

6.3.4 Lack of competence and understanding

Searle (2011b) and Olding and Fitzgerald (2011) emphasise that a successful process management adoption requires having the competences required to provide the necessary skills, tools and methods. Searle (2011b) also states that a common problem is that companies underestimate the scope of adopting process management. Interviews have shown that the views on process orientation significantly vary within the case company. Some interviewees think of it as an end-to-end approach considering everything between the external suppliers and customers, others think of it as internal processes and projects. This indicates the great need for creating a unified view on process management within the case company.

The benchmarking organisation chose to use early and up-front communication with the employees regarding what the change meant, as well as what it did not mean. A two-day workshop was provided to all employees, where the employees were taught the basics of working with processes, and were engaged in exercises within their process groups.

6.4 Critical Aspects in Adopting Process Management

This section presents and concretises critical factors for the case company to successfully adopt process management. The critical aspects have been grouped into heading as seen in Table 19.

Table 19. *Critical aspects in adopting process management at the case company.*

Area	Critical aspects
Change strategy	- Change strategy matching the gap between current and desired organisational state. - Communicate vision and objective of the adoption. - Continuously realign the change strategy. - Provide employees with time and education.
Culture and change resistance	- A change in culture in mindset will be needed. - Dissidence should be encouraged in order to create a change-friendly work environment. - Share and visualise progress and success stories. - Important to create a sense of urgency among the employees, in order for the willingness to change to increase. - Use cross-functional process groups in order to decrease the risks for rivalries.
Creating commitment	- The change needs to be communicated with the employees clearly and up-front, and aim at gaining support in power groups early. - A committed and engaged top management is critical. Managers will also need to actively delegate responsibility for the process improvement work. - Visualise the desired state in order for employees to get a common understanding of the goal, and create an inspiring atmosphere by letting people be involved and influence the process work. - A process management champion can be used who has the responsibility for creating momentum and organisational commitment. - Regional transparency can encourage process work, and can be ensured by including representatives from the different regions into the process groups.
Controlling the transition	- Actively communicate with internal and external stakeholders during the change, to keep them updated. - Let employees ask questions about the change, use up-front communication with them, and share potential conflicts in advance.
Provide early success stories	- It is important that the first process chosen to improve has a high chance of a positive outcome, and if the process targets customers directly it is easier to show the achieved benefits. - Prioritise among your processes in order to gain the largest impact on the business value.

6.4.1 Change strategy

Interviewees state that there is little knowledge about the process management directive, and the strategy for adopting it. Searle (2011b) states the change strategy should always be chosen based on the gap between current state, which must be identified and measured before starting the adoption, and desired state. To identify the gap an analysis using Hammer's (2007) PEMM, and a cultural analysis as suggested by Olding and Searle (2011a), can be performed. Both the benchmarking study and Searle (2011b) highlight the criticality of communicating

the vision and objective of the adoption for a successful result. However, Page (2010) emphasises that stating the vision and objective might not be sufficient, the change strategy should also be continuously re-aligned throughout the change.

The case study interviews show differences in the perceived scope of a process management adoption. Some view it as a minor change since the company already is reasonably process-orientated, whereas others see it as major change that will require resources and time. Searle (2011b) stresses that a common mistake is to underestimate the scope of the process management adoption. That view is supported by the benchmarked organisation who valued the provision of time and education, and it was not until after several years the full effect of process orientation could be seen. Sever (2007) emphasises that management needs to provide employees with enough time to build cross-functional trust.

6.4.2 Culture and change resistance

For process management to become a part of an organisation that currently is functionally-orientated, Kennerfalk and Klefsjö (1995) state that the culture will need to change. Interviewees from the case company also argue that a change will require quite some efforts due to the functional roots of the company. While some interviewees state that the company's mindset has started to change already, a catalyst to accelerate the change has also been said to be needed. Especially due to that the company has been profitable with their current culture and organisational structure in the past. Kets de Vries and Balazs (1999) stress that it is hard to let go of knowledge that has contributed to past success.

Kets de Vries and Balazs (1999) argue that in order to speed-up organisational change, the individuals should be addressed. The benchmarking organisation has worked actively with encouraging dissidence within its organisation, the importance of which is also shared by Nystrom and Starbuck (1984) and Kets de Vries and Balazs (1999) who state that it enables a change-friendly culture, which in turn is necessary for a change process to end successfully. Similar to the change resilience training stressed by Olding and Fitzgerald (2011), the benchmarking organisation held workshops that encouraged cross-functional discussions and sharing of success stories. Visualising the positive effects of process management will be important for the case company, especially since they have had two previous attempts to adopt process management that failed.

To further reduce change resistance, theory and the interviewees from the benchmarked organisation agree on that a sense of urgency and willingness to change must be created (Nadler & Tushman, 1997). According to the literature study it is crucial to have a successful first project with a clear view of the desired outcome in order to raise the willingness to change (Searle, 2011b). The benchmarked organisation highlights the importance of having positive examples and using different ways to communicate the examples since the individuals will more easily be convinced if the example reflects their own experience.

Case company interviews have shown that the implementation of new things often creates a feeling of not-invented-here. At the benchmarked organisation similar issues were seen,

where some professions were more reluctant than others to adopt changes. The issues of not-invented-here and professional or functional rivalries were, at the benchmarked organisation, solved by using cross-functional process groups including different professions and departments. Additionally, interviewees at the benchmarked organisation and Searle (2011b) state that the adoption should not be seen as a massive one-off project, it is rather a way of describing the daily work that should be continuously improved.

6.4.3 Creating commitment

Nadler and Tushman (1997) state the importance of having a committed management during an organisational change. The desired state of the change should be communicated to the employees clearly and up-front (Dangot-Simpkin, 1991; Dell, 2005; Nadler & Tushman, 1997). The interviewees at the benchmarking organisation all emphasised that a committed and engaged top management was a key factor to their organisation's success in becoming process-orientated. Their top management has been seen to "walk the talk", frequently asked questions, and showed interest by paying attention to how the initiative was progressing.

Nadler and Tushman (1997) state the need for gaining support in power groups, which was seen as a key step also at the benchmarking organisation. By having a committed doctor influencing his colleagues, the willingness to change was greatly increased throughout the organisation. Another important factor at the benchmarking organisation was that the managers actively delegated responsibility for the process improvement work, creating the need for employees to become committed.

It appears to be a perception among employees that problems are usually caused by other functions and that someone else should carry out the change first, which could indicate a lack of engagement and commitment. The benchmarked organisation overcame the risk of lack in engagement by letting interested employees get involved and influence the project, which helped to create an inspiring atmosphere. Literature supports the importance of engagement, and argues that a good way to achieve it is to have a process management champion with the responsibility of creating momentum and organisational commitment (Searle, 2011b).

The benchmarked organisation created regional transparency by, to the extent it was possible, making sure representatives from each region were represented in the process groups that were created. If applicable with regards to time zones, this could be effective also for the case company in order to create engagement for process work across regions.

6.4.4 Controlling the transition

Searle (2011b) highlights the importance of creating a governance structure in order to align process management to the business strategy and control the adoption. The governance structure is recommended to include a competence centre possessing knowledge of processes and change management (Searle, 2013). Searle (2011b) argues that the competence centre should have a close relationship with the process owners. Interviews at the case company reveal that there is a lack of a governance structure focusing on processes. The interviewees further argue that clear ownership must be established for the process management initiative.

Nadler and Tushman (1997) emphasise that there are high levels of uncertainties during organisational change and that the transition must be controlled. In order to control the transition and succeed with the change, active communication with internal and external stakeholders is needed (Nadler & Tushman, 1997; Olding & Fitzgerald, 2011; Kets de Vries & Balazs, 1999). Let employees ask questions about the change, use up-front communication, and share potential conflicts in advance (Kets De Vries & Balazs, 1999; Dangot-Simpkin, 1991).

6.4.5 Provide early success stories

As discussed in Section 6.4.2 it is essential to have a successful initial project showing the potential benefits. The benchmarking organisation stressed that many benefits were seen later on. In order to create a successful project, a wise choice would be to start with a process affecting the customers since the positive effects would be better visualised in such a project (Armistead & Machin, 1997). The project's success should then be communicated to the employees (Searle, 2011b). Harmon (2007) states that when addressing processes at the highest levels, it is important to keep the processes simple. The benchmarking organisation used a variant of that strategy by letting the most engaged and committed employees develop their processes, and by that providing good examples of process management for their colleagues.

There is a disharmony among case company interviewees about how much different functions would potentially benefit from an increased process focus, and where the potential is greatest. This could indicate that it would be beneficial to start the adoption in a structured holistic way, and then see where early positive effects where created and communicate such examples. The holistic approach would also reduce the risk that one function or process is limiting the achieved benefits of process management for the entire organisation by being more immature in the process work than the company as a whole. Interviewees at the benchmarking organisation stated that a more structured and top-down approach would have been much desirable in order to get an aligned adoption throughout the organisation.

7 DISCUSSION

In this chapter a discussion of the research is held, with the aim to provide answers to the research questions.

7.1 Implications for Research

The research set out to provide concretisations on the business value of process management, and to identify critical aspects for how to successfully adopt process management. The research is based on findings from a literature study, a case study, and a benchmarking study.

Process management is a mean to achieve a higher degree of process orientation (Kohlbacher & Gruenwald, 2011; Škrinjar & Trkman, 2013), and a process-orientated organisation can create several benefits including reducing the risks for sub-optimisations, and enabling a flexible and flat organisation (Chung, 1994; Kohlbacher, 2009; Gemmel et al., 2008). The potential benefits expressed during case study interviews, mostly concern an increase in transparency and coordination between different functions. This in turn has the potential to increase the speed of solving issues and the time spent on value-adding activities. It can also decrease quality problems, and provide an understanding among employees of how their work relates to the customer and to other employees' work.

The benchmarking study revealed that process orientation led to the realisation of how a common understanding of processes, and a focus on the customers, created an understanding of what activities actually created value for the customer. The employees began to evaluate their own work in terms of how they create value for the customer, which created engagement and possibilities for improving their processes. This has e.g. led to improved quality of the care and a higher resource utilisation.

Pritchard and Armistead (1999) emphasise that process management needs to be adapted to the company setting, which means that the potential business value will somewhat differ. This thesis shows that much of the business value tend to derive from three main benefits. First, it will provide employees with an understanding of what internal and external customers that their work contribute to, and how. Second, a common vision is created where employees start to focus on the customers and what creates value for the customers. Third, an environment to holistically govern process improvement work is created, which increases the possibility to manage and control the business.

There are discrepancies among authors on what strategy should be used to adopt process management, where some suggest a top-down approach whereas others suggest more of a bottom-up approach (Lee & Dale, 1998). The benchmarking interviewees stated the need for a top-down approach. Without a top-down approach, the different parts of the organisation was said to become somewhat misaligned, and the involvement and engagement across the organisation unbalanced. The interviewees at the benchmarking organisation stressed that

process improvements need to be carried out by people within each process, but should at the same time receive support when needed.

Interviewees from the case company highlight the risk of solely having a top-down approach when adopting process management initiative. Without adaptation to regions and sub-processes, there is a risk that process management will not create the business value intended. Processes and structures could be created that are not in line with local conditions and cultures.

Therefore it is likely that a top-down approach, with committed top managers, is the best way to make process management part of the business, and its strategy. In addition, a top-down approach needs to be balanced with a bottom-up approach in order to create commitment and engagement throughout the organisation, as well as achieving the local adaptation.

7.2 Future Research

The research field of process management was found general, lacking concretisation of both potential business value and adoption strategies. While this thesis mostly agrees on that much of the potentials and risks with process management will depend on the company setting, and that process management needs to be adapted to the company setting, some concretisation based on the case company and benchmarking study is provided. Since this research is limited, further case studies would be needed in order to draw any conclusions of its generalisability. For example, even though the research is focused on the highest and most general process level, what implications are overlooked by comparing a benchmarking company directed at providing services within a single county, with a manufacturing company producing and shipping products globally?

In order to provide support for managers in adapting a process management initiative to their organisation, future research is suggested to identify possible common denominators for what process structure and approach has become successful in what kind of settings and organisational sizes. For example, what kind of process structure with what degree of formality seem to have been most successful for a global manufacturing company with 1 500 employees, active in an industry with low technological disruption? While it would not provide one design to fit them all, it would certainly narrow the scope of approaches interesting for a certain company. In order to come to such conclusions, research based on multiple case studies could be used.

It would also be interesting if future research could investigate more in terms of adoption strategies, since this thesis has just briefly touched the topic by identifying critical aspects in successful adoptions. It could also be interesting to go deeper into what differences exists between functions, and between different hierarchical levels.

7.3 Implications for Managerial Practice

Similar to what Franz and Kirchmer (2012), Powell (1995), and Pritchard and Armistead (1999) state, the benchmarking and case studies suggest that process management needs to be adapted to the company setting to successfully create business value. In order to create business value in a process management adoption, the potentials need to outweigh the risks. While each company setting can create a unique set of potentials and risks, some seem to be general and arise more frequently.

A clear potential has been seen in that a higher degree of transparency can be achieved by the increased cross-functional focus of process management. The increased transparency can lead to a common visualisation and understanding of what creates value for the customers, and how the employees' work contributes to that. In the benchmarking organisation the transparency towards the customer was increased, leading to insights into what the patients actually expected in terms of information from the personnel. This in turn led to an increased patient satisfaction.

In the case company, an increased transparency could e.g. provide the abilities to use more holistic measurements. This can e.g. provide an understanding of how much time and resources are put in to solve a certain quality issue, to make sure that a delayed order is shipped as soon as possible, etc. When such insights are gained, the redundant work can be decreased and the work can be optimised in terms of what creates value to the company in a better way. For example, in the case company the time put on sales generating activities has big potential for improvement. By streamlining the administrative, non-sales generating, activities more time can instead be spent on tasks directly correlated with increased sales volumes. Moreover sales volume, the transparency would provide the case company with the possibility to address the costs related to poor quality. By being able to measure the total costs of poor quality in a better way, it is also possible to manage and reduce the same.

A common risk with process management is that organisations often tend to go too detailed in their process mappings, and thus hamper creative and innovative capabilities of the organisation. It could also hamper the daily work by forcing the employees to work in a less efficient way, e.g. by introducing a too rigid IT system than what is actually needed. The case company and benchmarking organisation both have experience from going too detailed in their process mappings, thus it is critical for organisations to understand that process maps are not a goal in themselves, but rather a facilitator for understanding and improving the daily work.

There is also a risk that process management creates an additional layer of authority, which could create a complex authority structure with; extra administration, dual authority confusion, and power struggles as a result. There is no clear solution to this risk, however it is believed that companies can decrease issues related to the authority structure by having clear accountability and responsibilities for both functional and process managers. An important step to achieve this is to increase the power and mandate of employees with process

responsibilities. Reaching a common view and prioritisation based on what is important from the customers' perspective, is also seen as critical in order to overcome the issues of power.

Another risk is that the process management initiative consumes many resources without really providing any concrete and quantifiable benefits. Both the literature and benchmarking studies indicate the difficulty of measuring the benefits achieved with process management. There is also the risk of measuring just for the sake of measuring, rather than measuring what actually is important. This indicates the need for finding a few measurements which importance can be derived to the business strategy, and which importance can be valued by most functions in the organisation. In order to identify the desired outcome and to align it with the business strategy it is necessary to have strong top management support, since they are setting the business strategy and direction for the organisation to follow.

Related to the adoption of process management, several key steps have been found in making the potentials outweigh the risks. If this is not achieved, process management will most likely not create the business value intended.

A cross-functional focus needs to be created. This should be possible to achieve by starting within top management who possesses a holistic view of the organisation. Top management further has the authority to establish process mandate and accountability, and without top management "walking the talk" and communicating the importance of it, employees would probably not be inclined to change their way of working.

The employees need to have an understanding of the idea and mindset of process management before an adoption is started. Without having a fundamental understanding of its core principles, it is difficult to see the value of process work, and the creation of engagement and commitment would be very hard. It seems as the best way to create commitment is to have an engaged and supportive top management who provides the employees with clear goals and expectations of the adoption, and who provides the time and resources needed to adopt the new way of working. Maintaining momentum of the change and keeping the engagement high can be facilitated by sharing success stories in combination with visualising progress in quantifiable terms across the organisation.

Before starting an adoption of process management a structure for governance should be established to ensure continuous alignment with the business strategy, and to connect it to the strategic business outcomes. The employees within the governance structure should have deep competence in process management, and while process improvement work should be carried out in the processes themselves a competence team could be used to support the process work with e.g. tools and methods, when needed.

8 CONCLUSIONS AND RECOMMENDATIONS

The chapter starts off with a section where the research questions are answered. After that, recommendations for the case company are presented.

8.1 Conclusions

The purpose has been divided into four research questions:

RQ1: What are common potentials of adopting process management?

The potentials of adopting process management depend on the specific organisational setting. However, three more general potentials have been identified:

- It provides each employee with an understanding of how their work contributes and relates to others', increasing the transparency between functions and decreasing the internal waste.
- It provides employees with a common understanding of what is actually valued upon by the customers. This leads to a focus on what activities create value for the customer.
- By providing a holistic structure for governing process improvement work, it creates better manageability and control of the business.

RQ2: What are common risks with adopting process management?

There are risks related to process management and the magnitude of the risks depends on the setting of the organisation adopting it. Common risks identified are:

- The design of the initiative is not aligned with the business strategy, which means that the effects of the adoption are not in line with what were intended.
- It could create too rigid processes, hampering the daily work and consuming unnecessary resources.
- The authority structure could become complex, creating increased amount of administration and unsettlements within the organisation.

RQ3: What business value can be created when adopting process management in a manufacturing company?

The business value of process management for a manufacturing company could be divided into three categories.

- A focus on activities that create value for the customers and the company, leading to increased customer satisfaction.
- A visualisation and reduction of waste and costs related to poor quality.
- Provides end-to-end and cross-functional measurements, providing more customer-focused facts to base decisions on.

RQ4: How should process management be adopted, in order to become successful?

- A governance structure should be established, linking the adoption to the business strategy, and providing support and control to the process work. When a top-down approach is used, local employee involvement should also be focused on in order to avoid standardised processes hampering the local work.
- Education to all employees is necessary to make sure there is a common understanding of its underlying concept.
- Commitment and engagement should be created by having committed and engaged managers communicating the change strategy, by involving employees in the development work, and by sharing the progress achieved across the organisation.
- Measurements need to be linked with the business strategy in order to quantify and demonstrate the business value. By having the possibility to provide quantitative data, long-term engagement will be easier to achieve.

8.2 Recommendations for the Case Company

Start now: The company group has expectations on the case company to adopt process management and align their highest level processes as well as their management and support processes with the company standard. Adapting a process management initiative to the case company will take time, thus it is recommended that the case company starts as soon as possible. For example, cultural change is needed, and sub-process levels as well as regions will need to be included in the adaptation, thus the time at hand for carrying out the initiative is a critical aspect.

The recent trend of having a larger share of industrial end-customers puts increasing demands on replacing the current short-term problem solving mentality, of using “fixers”, with a more structured and long-term problem solving. Process management could provide a more standardised approach for solving problems, thus the sooner it is adopted the quicker the requirements of the industrial end-customers can be fulfilled.

The analysis of the process maturity at the case company identified areas that are currently limiting the company from reaching the next level in their process work. Based on that analysis, it is recommended that the case company starts with fulfilling the first, E-1, level.

Thus, the areas to start with are related to leadership and culture. The strategy for the adoption needs to be better communicated and a clearer engagement from the top is needed. Going from a functional to a process mindset will generate change resistance, especially since the functional structure has brought previous success. This should be addressed by providing education up-front.

Management support: The literature study, the benchmarking study and case company interviewees all state the need for having a committed top management when adopting process management. Without top management's support, the process owners will not receive the power needed to drive process improvements, across different functions. It is recommended that the strategy for the adoption is top-down with local adaptation, and that the strategy is clearly communicated with the employees up-front. This is especially important since case study interviewees and internal surveys have indicated that the communication from the top, at times, have been insufficient.

Education: The case company has shown to be a functional company, in terms of where power and resources are distributed, as well as in how employees relate to their work. This has led to functional barriers and white spaces in-between them. A process management adoption is thus suggested to put early emphasis on aligning the employees' views of process management. This can be done by informing employees about the change, providing opportunities for employees to discuss and share their views, and on teaching the basics of process management. Without having an aligned understanding of process management among the employees there is a risk that the adoption solely consumes resources without creating any business value.

Designing the initiative: A governance structure for process management should be established. It will enable process improvement work to be carried out holistically and more structured, and it will provide top management with control over the process work. For example, top management is then able to make sure that the process work is aligned with the strategic business outcomes. An iterative approach where the process management design evolves after time is recommended, since the case company will not be able to know beforehand how the most ideal design for their company looks like.

In order to perform the adaptation to the case company's setting, an investigation of how they work today will need to be carried out throughout the company. It is not until after such an investigation full knowledge of what needs to be changed is gained. The holistic top-down approach needs to be combined with local adaptation, since the risk of hampering the work in sub-processes or in other regions will be decreased by adjusting the level of process standardisation and details based on the specific needs. Examples of the need for such adaptations could be differences in regulations and differences in the need for creativity and innovative spirit. Experience from previous adoption attempts should also be used to decrease the risks up-front.

Employee engagement: Adopting process management involves much change resistance, which makes it important that the right people are used to carry out the change. Change agents should sometimes be picked for their engagement rather than for their process management knowledge. To maintain a high engagement level, it is recommended that success stories and good examples from one process are shared across the organisation. One should also have a few more important process measurements that are relevant to employees within many of the functions, and share them continuously during the transition to show progress. For example, the benchmarked company used a measurement for many functions to align around. It was the lead time from a patient's referral (or first contact) to the first doctor's visit.

9 APPENDICES

Appendix 1. The Enterprise Maturity Model of Hammer's (2007) PEMM

		E-1	E-2
Leadership	**Awareness**	The enterprise's senior executive team recognizes the need to improve operational performance but has only a limited understanding of the power of business processes.	At least one senior executive deeply understands the business process concept, how the enterprise can use it to improve performance, and what is involved in implementing it.
	Alignment	The leadership of the process program lies in the middle management ranks.	A senior executive has taken leadership of, and responsibility for, the process program.
	Behavior	A senior executive endorses and invests in operational improvement.	A senior executive has publicly set stretch performance goals in customer terms and is prepared to commit resources, make deep changes, and remove roadblocks in order to achieve those goals.
	Style	The senior executive team has started shifting from a top-down, hierarchical style to an open, collaborative style.	The senior executive team leading the process program is passionate about the need to change and about process as the key tool for change.
Culture	**Teamwork**	Teamwork is project focused, occasional, and atypical.	The enterprise commonly uses cross-functional project teams for improvement efforts.
	Customer Focus	There is a widespread belief that customer focus is important, but there is limited appreciation of what that means. There is also uncertainty and conflict about how to meet customers' needs.	Employees realize that the purpose of their work is to deliver extraordinary customer value.
	Responsibility	Accountability for results rests with managers.	Frontline personnel begin to take ownership of results.
	Attitude Toward Change	There is growing acceptance in the enterprise about the need to make modest change.	Employees are prepared for significant change in how work is performed.
Expertise	**People**	A small group of people has a deep appreciation for the power of processes.	A cadre of experts has skills in process redesign and implementation, project management, communications, and change management.
	Methodology	The enterprise uses one or more methodologies for solving execution problems and making incremental process improvements.	Process redesign teams have access to a basic methodology for process redesign.
Governance	**Process Model**	The enterprise has identified some business processes.	The enterprise has developed a complete enterprise process model, and the senior executive team has accepted it.
	Accountability	Functional managers are responsible for performance, project managers for improvement projects.	Process owners have accountability for individual processes, and a steering committee is responsible for the enterprise's overall progress with processes.
	Integration	One or more groups advocate and support possibly distinct operational improvement techniques.	An informal coordinating body provides needed program management while a steering committee allocates resources for process redesign projects.

E-3	E-4
The senior executive team views the enterprise in process terms and has developed a vision of the enterprise and its processes.	The senior executive team sees its own work in process terms and perceives process management not as a project but as a way of managing the business.
There is strong alignment in the senior executive team regarding the process program. There is also a network of people throughout the enterprise helping to promote process efforts.	People throughout the enterprise exhibit enthusiasm for process management and play leadership roles in process efforts.
Senior executives operate as a team, manage the enterprise through its processes, and are actively engaged in the process program.	The members of the senior executive team perform their own work as processes, center strategic planning on processes, and develop new business opportunities based on high-performance processes.
The senior executive team has delegated control and authority to process owners and process performers.	The senior executive team exercises leadership through vision and influence rather than command and control.
Teamwork is the norm among process performers and is commonplace among managers.	Teamwork with customers and suppliers is commonplace.
Employees understand that customers demand uniform excellence and a seamless experience.	Employees focus on collaborating with trading partners to meet the needs of final customers.
Employees feel accountable for enterprise results.	Employees feel a sense of mission in serving customers and achieving ever-better performance.
Employees are ready for major multidimensional change.	Employees recognize change as inevitable and embrace it as a regular phenomenon.
A cadre of experts has skills in large-scale change management and enterprise transformation.	Substantial numbers of people with skills in process redesign and implementation, project management, program management, and change management are present across the enterprise. A formal process for developing and maintaining that skill base is also in place.
The enterprise has developed and standardized a formal process for process redesign and has integrated it with a standard process for process improvement.	Process management and redesign have become core competencies and are embedded in a formal system that includes environment scanning, change planning, implementation, and process-centered innovation.
The enterprise process model has been communicated throughout the enterprise, is used to drive project prioritization, and is linked to enterprise-level technologies and data architectures.	The enterprise has extended its process model to connect with those of customers and suppliers. It also uses the model in strategy development.
Process owners share accountability for the enterprise's performance.	A process council operates as the most senior management body; performers share accountability for enterprise performance; and the enterprise has established steering committees with customers and suppliers to drive interenterprise process change.
A formal program management office, headed by a chief process officer, coordinates and integrates all process projects, and a process council manages interprocess integration issues. The enterprise manages and deploys all process improvement techniques and tools in an integrated manner.	Process owners work with their counterparts in customer and supplier enterprises to drive interenterprise process integration.

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