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Creating sustainable process management in healthcare

A framework based on 17 case studies and its application to the Skaraborg Hospital Group

Master of Science Thesis in Quality and Operations Management

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Master Thesis – Creating sustainable process management in healthcare - a framework based on 17 case studies and its application to the Skaraborg Hospital Group

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Abstract

Process management, i.e. focusing on processes rather than functions and building up the organizational structure around them, has been around for a long time, a good part of that also in healthcare organizations. The temptation to use it is high because of its many positive effects; however, especially in healthcare organizations there are specific obstacles to the implementation of process management. This thesis tries to identify them and provide a set of suggestions that increase the chance of implementing process management in a lasting way. Furthermore, the results are applied to Skaraborg hospital in order to support them in their implementation efforts.

From the conducted literature review it becomes clear that the feat of sustainably implementing process management in healthcare is no simple one. Rather, several different aspects need to be planned and put into place in order for it to work. Through a formalized implementation process infrastructure and culture of the organization need to be shaped in a way that is conducive to process management, always keeping the value for the customer prominently in mind.

As it turns out, the hardest part is to manage the cultural change process in an effective way. As healthcare has an extremely hierarchical structure, which needs to be converted to interdisciplinary teamwork, the transition is particularly long. In order to still be successful in this, a clear vision needs to be set, which is repeatedly and clearly communicated throughout the organization. In addition to that, leadership of the transition should be divided onto several shoulders, making the individual part easier to bear. Milestone results need to be clearly visualized and celebrated accordingly, in order to encourage the staff to continue. All the time, the progress of the implementation needs to be closely monitored, the better to see deviations from the desired state as soon as possible.

Although the implementation of process management in healthcare takes a long time and may at times seem unmanageable, keeping in mind a few key aspects, presented in an interconnected framework, will help tremendously in achieving the goal and reaping the rewards of having an effective process management in place in the organization.

Keywords: process management, healthcare, change management

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1 Introduction

In today's time, everything is becoming faster and faster as well as increasingly complex. This applies to multiple areas, including healthcare. Managers of hospitals seem themselves ever more torn between the different needs of the various stakeholders of a hospital. (Goddard, Alty, & Gillies, 2001) In addition, budgetary cuts and increasing financial performance expectations make it even harder to run the hospital in a way that provides high quality services to patients on the one side, while on the other side using virtually no money for this.

Process management has been shown in other industries to have extremely positive effects on quality as well as costs. (Palmberg, 2009) It is therefore only natural to try to use process management in order to solve problems in healthcare. However, as healthcare organizations differ from for instance manufacturing organizations, they offer specific hurdles to the introduction of process management. Tasks are more variable as they deal with humans instead of products, errors are more severe for the same reason and the hierarchical structures that have been developing for decades give rise to the suspicion that cooperation between different specialties, let alone different professions will never happen.

Although the odds for success apparently aren't good at all, the potential benefits of victory warrant at least a more thorough examination of the issue and possible success factors. In order to provide practical relevance, the results of this examination will be set in the context of Skaraborg hospital. The question to be answered is whether this hospital has the potential so shine with process management or whether all attempts of introduction will be doomed by the inherent characteristics of the healthcare system.

2 Background of the study

This study is part of a research project about process management at Skaraborg hospital. Its focus is the applicability of process management in healthcare in general and the applicability with regard to the conditions at Skaraborg hospital. Being part of a larger research project, this study is able to revert to data collected in other steps of the project, rendering an additional on-site data collection unnecessary.

2.1 Purpose

The purpose of this Master Thesis is to compile the experiences that have been made with process management in different case studies within the healthcare sector. It is to be examined, what problems may arise during the process and what actions promise a high probability of success. This will help to evaluate the applicability of process management in healthcare organizations, especially at Skaraborg hospital. It will be determined, what kinds of barriers or facilitators surface during the introduction process. Also, ways to overcome the identified barriers will be analyzed.

2.2 Problem analysis and research questions

Even though the application of process management in healthcare is still rather new, several attempts have been made and their cases have been described in literature, each with a unique set of issues and differing resulting implementations of the principles. It is therefore necessary to collect these cases and consolidate their barriers and facilitators. The resulting list can then be used in comparison to the conditions at Skaraborg hospital and will most likely give ideas and inspiration for further development there.

Considering the various difficulties that can arise when implementing process management in healthcare organizations, the research questions remain on a general level:

1. How can process management be anchored in a lasting way in a healthcare organization?
2. How are the results applicable to Skaraborg hospital?

2.3 Delimitations

In this thesis, a broad scope is to be kept, which means various aspects will be taken into account; however, each of them will only be dealt with on a somewhat general level, as this is not supposed to be an in-depth analysis of one specific issue. This is justified by the fact

that the literature provides predominantly case studies with few extensive summaries of their results.

Taking into account the given time frame for a Master Thesis, the number of analyzed case studies had to be kept reasonable. Rather than striving for an exhaustive review of literature, care was taken to achieve a collection of studies that represent different contexts, allowing different kinds of barriers to come to the fore and be included in the resulting compilation.

2.4 Structure of the report

This thesis is split into seven parts. Following the introduction and the background of the study, the theoretical background of relevant concepts will be given. Process management as such will be discussed, including the topics of Business Process Re-Engineering and pathways. An introduction will also be given to the concept of lean management as it is closely related to process management. Concluding remarks will then be made about change management, as this has emerged as a very important topic when moving towards process management.

The next chapter describes the methodology that was used in this study. The general research approach will be described as well as the steps that were taken for data collection and data analysis respectively. A critical assessment of the chosen methodical approach then completes chapter four. Chapter five deals with the data analysis, presenting the analyzed case studies and compiling the issues that come up, when implementing process management in a healthcare organization. In addition, the current situation at Skaraborg hospital is described.

Chapter six then builds on the previous chapters in answering the research questions posed in this thesis. The compilation of barriers and facilitators will be discussed and the situation at Skaraborg hospital will be judged in light of those results. From this, general managerial implications are taken and directions for future research are indicated. The last chapter sums up the contents of this thesis in a short conclusion.

3 Theoretical background

This chapter includes the theoretical background on topics relevant to this thesis. Process management as such will be introduced and as process management is also a vital component of lean management¹, lean thinking will also be explained briefly. Lastly, an introduction to change management will be given as this is a crucial factor in implementing process management.

3.1 Process management

The proposal to focus on processes rather than products has been around for 80 years with Shewart (1931) being the first one to argue for it and process management as an explicit concept has been a focus since the early 1980s. In 1993 Hammer & Champy (1993) introduced the idea of Business Process Re-engineering, which they defined as “the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical contemporary measures of performance such as cost, quality, service and speed” (p. 32), which once again gave process management a boost in popularity. Although scholars argue about the advisability of such a radical approach as Business Process Re-engineering, they mostly agree on the potential that process management as such holds for organizations. Consequently, interest in it has not yet decreased (Palmberg, 2010).

Palmberg (2009) discovered that there is no common definition of either a process or process management. From an extensive literature review she defines a process as “a horizontal sequence of activities that transforms an input (need) to an output (result) to meet the needs of a customer or stakeholder” (p. 207). For process management, there are two different movements, one that focuses on managing and improving single processes and one that takes a more holistic view of the whole organization (Palmberg, 2009).

On the one side it can be distinguished between core processes and support processes (Vera & Kuntz, 2007). Core processes have to do with the strategic objectives and competitive advantages of an organization and are targeted towards external customers. Supporting processes on the other hand are targeted towards internal customers and enable the core processes to be executed as planned. On the other side, especially in healthcare it can be

¹ As the terminology is not clearly defined, process management and lean management are even sometimes used interchangeably.

distinguished between standard, routine and non-routine processes (Lillrank & Liukko, 2004). Standard processes are repeated in exactly the same way over and over again. They can be clearly defined and demand compliance with the specifications. Routine processes are a little less static, as they are also repeated often but with small differences in the execution. Usually one option to proceed can be chosen from several different ones depending on the situation. Clinical guidelines containing these options and the decision factors can be used here. Non-routine processes are processes that occur only once (or very few times) and that demand an approach based on interpretation of symptoms and the intuition of the employee(s) dealing with the task.

The key point of process management is the fact that the organizational structure results from the processes in the organization. In other words, the dominant characteristics of the organizational design are business processes that stretch across different functions. However, processes cannot be the single focus of the organization. Functional and product orientation need to be upheld making process management necessarily only part of the organizational structure, albeit a large and important part. There are even scholars who say that organizations are always oriented towards processes to a higher or lesser degree rather than classifying them into “process based” and “not process based”. (Vera & Kuntz, 2007)

Focusing on processes means that the organization is split into organizational units, each of which handles a process as exhaustively as possible and which have minimal interaction between one another, reducing the coordination costs. Within the units, interdisciplinary teams make sure that the tasks are fulfilled autonomously without management involvement. Compared to a functional organization, the employees have a higher level of autonomy and handle more diverse tasks. (Vera & Kuntz, 2007)

This leads to a very important aspect of process management, namely decentralization: the decisions are taken at the same level where the work is performed, which not only accelerates the process but generally also leads to higher staff satisfaction and motivation. One way to do this is by implementing profit centers and linking pay to certain performance indicators, be it individually or in a group. The different units are then responsible for their own profit but also have the power to make decisions influencing it. Employees can feel challenged and empowered and usually enjoy their work more than when someone just tells them what to do all the time. (Vera & Kuntz, 2007).

A key characteristic of process management is the focus on customers. Only those tasks that actually add value to the final product may be considered, because focusing on what the customer wants brings considerable quality improvement to the organization (Vera & Kuntz, 2007).

The reasons for implementing process management and the results that can be achieved by doing so are manifold. Palmberg (2009) has identified several in her literature review, which can be found in Table 1.

Reasons for implementing process management	Results from implementing process management
Removing barriers between functional groups and bonding the organization together Controlling and improving the processes of the organization	Genuine understanding of what quality is for the customer and how each employee contributes to it Improved customer satisfaction and increase in customer base
Improving the quality of products and services	Common language and standardization of tasks within the organization and a more holistic view of the organization
Identifying opportunities for outsourcing and the use of technology support for business	Higher efficiency
Improving the quality of collective learning within the organization and between the organization and its environment	Decreased costs (in various areas of the organization)
Aligning the business processes with strategic objectives and customer needs	Higher quality of work
Improving organizational effectiveness and improving business performance	Shorter throughput times and higher delivery accuracy
Understanding core processes in order to continue to operate effectively and gain competitive advantage	Better learning process in the organization
Gaining back market shares and increasing employee satisfaction	Better financial performance as a result of many of the other outcomes

Table 1: Reasons for and results of implementing process management [source: (Palmberg, 2009)]

This goes to show that process management is a very broad concept that can be used for different objectives and has high potential in several areas. However, in order to reach this potential, process management has to be implemented and maintained adequately in the organization.

The term pathway has become quite widely used in relation to process management in healthcare. A pathway is tailored to a specific group of patients and its documentation includes criteria for including or excluding patients (depending on their condition), the necessary diagnostic steps, the course of treatment (including specific therapies) and the expected outcome; however, there is also room for adjustment to individual conditions, as long as it is justified (Bieber, 2010). Pathways are consequently documented and somewhat standardized processes in healthcare.

3.2 Lean management

About two decades ago, lean thinking diffused from Asia to the Western world and has since developed from being only applied within car manufacturing, its original industry, to being

adapted to many different settings (Hines, Holwe, & Rich, 2004), including the service sector in general and, more specifically, healthcare (Fillingham, 2007) (Åhlström, 2004) (Papadopoulos, 2008) (Kollberg, Dahlgaard, & Brehmer, 2007). The key point of lean thinking is to eliminate all waste, meaning all activities, which do not add value to the final product. Using this elimination approach is the exact opposite of the more common approach of focusing on the value-adding steps and improving them incrementally (Fillingham, 2007).

Lean thinking is based on the Toyota Production System (Pegels, 1984) and Womack and Jones (1996) were the first to give an extensive written account of this. They developed five lean principles that have found great acceptance throughout literature (Hines, Holwe, & Rich, 2004) (Papadopoulos, 2008) (Kollberg, Dahlgaard, & Brehmer, 2007). These principles are the identification of customer value, the management of the value stream, developing a flow production, using “pull” techniques and striving for perfection and will be explained in the next sections.

3.2.1 Identification of the customer value

If seeking to eliminate all waste or non value-adding activities with regard to the final product, it must naturally first be defined what it is that adds value for the customer. Kollberg, Dahlgaard & Brehmer (2007) point out that in order to do this, the very first step has to be the decision of who the customer actually is. They also mention that this is rather complicated within the healthcare environment, since the patient who receives the service usually does not pay for it, meaning that there are multiple stakeholders involved. In addition to the patient, health insurance companies, private investors and governmental organizations are some of the possible stakeholders in the healthcare system. However, they conclude that the patient’s needs should receive the most attention, when deciding which activities are value-adding, because “the main mission of healthcare is to treat and cure patients, who are the end-consumers in the care process” (p. 13).

Trying to complete the task of finding out what is value-adding for the patient, Fillingham (2007) gives examples of techniques that can be used: observation of provided care can be made; patients can be asked to keep diaries, which are later analyzed with regard to value-adding activities; questionnaires can be given out to current and former patients, asking about positive and negative experiences during their care process; interviews and focus groups can be held with the same objectives. Åhlström (2004) draws attention to the fact that customers differ from each other and that one thing that adds value for one customer

may be completely useless for another. However, he still accepts the necessity of identifying the customer value.

3.2.2 Management of the value stream

The next principle deals with determining whether or not the identified value is actually delivered to the customer or - in the case of healthcare organizations - the patient. This principle is most closely related to the key point of lean thinking, the elimination of waste. Fillingham (2007) describes the approach as putting on “waste goggles” and then examining a specific process in order to determine at what point in the process waste occurs. A very structured approach of doing this is to perform a value stream analysis. This means mapping all activities related to the process and later evaluating each one, determining whether or not it is value-adding for the patient. Those that can be identified as not adding value for the customer are then eliminated (Fillingham, 2007) (Kollberg, Dahlgaard, & Brehmer, 2007). However, Grove et al. (2010) caution that this is a very difficult process in healthcare, as waste is usually deeply engrained in the process, making it hard to identify and remove.

In order to give ideas and examples of what to look for in the care process, Fillingham (2007) has taken Toyota’s original seven kinds of waste and adapted them to a healthcare setting. According to him, moving patients and equipments, accumulating unneeded stocks and supply, moving staff and information, having delays in diagnosis and treatment, performing unnecessary test, having stressed and overworked staff and making errors in treatment are all non value-adding for the patient and should therefore be eliminated from the care process.

3.2.3 Developing a flow production

The third principle combines the previous two and aims at designing a smooth care process, which means creating a flow of the patient from the beginning to the end, ignoring the traditional boundaries in hospitals between professions and/or departments (Womack & Jones, 2003). The goal of the whole process is giving value to the patient and this should be done without additional non value-adding tasks. In order to achieve the smooth flow, the use of interdisciplinary teams is greatly supported in literature (Womack & Jones, 2003) (Åhlström, 2004), because in the event of problems or complications, those can be solved using the combined expertise of the different team members, instead of transporting the patient from one department to the next. This not only reduces the amount of time until the problem is solved, but also eliminates unnecessary movement of the patient, which is annoying in the best case and can be dangerous in the worst.

This approach is also very compatible with Åhlström's (2004) idea of decentralized responsibility, which means that the frontline caregivers are responsible for the recovery process - not someone in middle or upper management - because they know the situation best. In order for the teamwork to be effective, information about the patient and their treatment needs to be easily available for every team member at any time. One way to do this is to make the information clearly visible to the team members. Kollberg, Dahlgaard & Brehmer (2007) suggest that this transparency also increases people's motivation to be involved in the process and to improve it.

The fact that everything should be easily visible to everyone is a very important basis for the Toyota Production System, which - as mentioned before - can be seen as the "mother" of all lean initiatives (Pegels, 1984). As Pegels (1984) points out, one of the ways transparency is kept at Toyota is the application of just-in-time production. That way, it is clearly visible to everyone at all times how much and what kind of materials are in the process. Also, they use so called Andon lights above their machines, which change color according to the status of the machine, e.g. is it working, being set-up for another process or is there a problem with it.

According to Parry and Turner (2006) visual process management tools help the communication between team members and support operations and processes in real time. The best visual aids are graphical representations, pictures, posters, schematics, symbols, transparencies and color coding. In order for a visual aid to be effective, a team must be empowered to develop their own visual process management boards, which can for example be a colorful physical visual control system. Every person involved must be able to see and fully understand the different aspects of the process and its status at any time. Senior management must support the use of visual management work and all team members have to have full input and control over their own board.

3.2.4 Using "pull" techniques

Using a "pull" technique means that another product should only be produced upstream, when the previous product has been consumed downstream (Womack & Jones, 2003). Kollberg, Dahlgaard & Brehmer (2007) point out, that services are inherently based upon the "pull" principle, because they are performed on the patient. Therefore they can only be conducted at the time and place, where the customer asks for them. However, support processes such as procurement of materials could theoretically be using a "pull" mechanism.

Kollberg, Dahlgaard & Brehmer (2007) as well as Åhlström (2004) all point out that certain conditions in healthcare don't allow a "pull" technique to be used all the time though. One important point is that the consequences of missing material can be particularly grave in healthcare. Therefore, it is preferable to have a certain safety stock of material instead of using an extreme "pull" system (Åhlström, 2004). Also, the initial demand stated by the patient may be completely different than the eventually delivered, necessary service. In that case, using a sheer "pull" system triggers the wrong service in the beginning. In order to avoid that, some buffer needs to be built into the process. (Kollberg, Dahlgaard, & Brehmer, 2007).

3.2.5 Striving for perfection

The last principle in lean thinking is striving for perfection. As clear and simple as this sounds, in reality it is very difficult to achieve. One aspect of it is doing things right the first time (also called zero defects, e.g. by Åhlström (2004)), which is particularly important in healthcare for obvious reasons. Another very important aspect is the continuous improvement of the current processes. Just like in other organizations it is difficult to achieve continuous improvement in healthcare (Åhlström, 2004) (Spear, 2005). It is more common to work around an occurring problem during a hectic workday instead of pausing to determine and eliminate its root cause (Spear, 2005). Also improvement meetings rarely have the necessary focus to achieve lasting changes in the way things are done, which is particularly true in hospitals (Åhlström, 2004). Nonetheless, perfection should be the ultimate goal, which of course will never be reached but should continuously be striven after, leading to an environment of continuous improvement. Taking into consideration that the consequences of mistakes in healthcare are usually much more severe than in other organizations, this is especially true. It is therefore imperative that people's attitudes be changed in this direction and ambitious but realistic targets be set in accordance with overarching objectives of the organization (Kollberg, Dahlgaard, & Brehmer, 2007).

3.3 Change management

When trying to change an organization, there are many obstacles that must be overcome and there are many approaches that are more or less appropriate, depending on the specific circumstances of the organization in question.

3.3.1 Change management in general

Nadler & Tushman (1997) describe the process as a move from a present state to a future state by going through a transition state. According to them, failures of such programs are often not design failures but rather failures in implementation. They identify three types of problems in the implementation process: the problem of power, the problem of anxiety and the problem of organizational control. The problem of power emerges, because organizations are political systems and the power distribution of the present state is destroyed in order to achieve the future state, which makes several stakeholders feel threatened, especially if uncertainty about the future state is high. In order to manage this problem, the political dynamics have to be shaped throughout the transition phase. This can be achieved by getting the support of key power groups, demonstrating leadership that supports the change, using symbols that everyone can identify with and building stability by providing time to prepare for the change and sending out consistent messages throughout the change process

Argyris (1999) agrees with the need for consistent messages but adds that managers also need to actually “walk the talk” in order to seem consistent to their employees. Kim & Mauborgne (2003) also find that in order to overcome the cognitive hurdle (i.e. convince people of the need for change) people need to experience the problems rather than receive abstract messages. They also give advice on how to overcome the motivational hurdle (i.e. making employees yearn to help with the change). Like Nadler & Tushman (1997) they suggest only motivating key people, who in turn can then influence the rest of the organization.

The problem of anxiety appears because the transition is leading towards an unknown state (Nadler & Tushman, 1997). This makes people stressed and nervous, resulting in opposition to the change, just so they can keep the structure the way they know it. When trying to manage this problem, it is necessary to motivate constructive behavior in the employees. This can be reached by creating certain dissatisfaction with the current state, obtaining appropriate levels of participation in the planning and implementation phase, rewarding desired behavior during the transition to the desired state and providing time and opportunity to disengage from the present state.

The problem of organizational control develops because the organization is in constant flux during the transition and the available control mechanisms are rendered useless by this (Nadler & Tushman, 1997). In order to counteract this effect, the transition needs to be

systematically managed. This means developing and communicating a clear image of the future state, using multiple and consistent leverage points, using transition devices such as transition managers and obtaining feedback about the transition state and evaluating success. The last point of obtaining and giving information about the state of the transition is also supported by Beer (2003).

Kotter (1996) has compiled a list of common mistakes, which lead to implementation difficulties and higher costs than anticipated. They generally fit with the framework by Nadler & Tushman (1997), emphasizing its relevance. For one, it is necessary to create a sense of urgency, if the change is really to take off. For another, a sufficiently powerful guiding coalition is needed to drive the change throughout the organization. Also, a vision of the desired state needs to be in place in order to have all employees on the same page. In addition to this, the vision needs to be communicated over and over until every employee knows it by heart and acts on it automatically. In order for the vision to be achievable, obstacles need to be removed so employees can enthusiastically go forward. It is also not at all advisable to only strive for the long-term goal without creating short-term wins. Employees need the constant encouragement in order to stick with the transformation. Another very important point is the fact that victory should not be declared too soon, because it can take up to 10 years for a change to be completed. Until that time, the change has to be monitored continuously so as not to be forgotten all over again. This also means that the change needs to be anchored sufficiently deep in the organizations culture. This aspect is also mentioned by Garvin & Roberto (2005), who determine that endurance is an important point for change to succeed.

When considering the effect that a change process has had, it is important to remember that successful changes inherently become forgettable. This happens because a successful change will diffuse into the organization's culture and become the natural pattern of work, while an unsuccessful change will be remembered as much ado about nothing (Book, Alänge, & Solly, 2004).

Kim and Mauborgne (2003) mention an important point with regard to overcoming the resource hurdle (i.e. handling scant resources). As change is a long process, resources are usually not sufficient. Instead of scaling down the desired result or constantly fighting for new resources, the available resource should be concentrated on those areas most in need of change. This way the most important things will get done first and other issues can be addressed a little later.

3.3.2 Change management in healthcare organizations

Mostly change management in healthcare follows the same principles as change management in other kinds of organizations. The main difference is presented by the hierarchical structures, which are more distinct in healthcare than in other organizations. This can make the communication more difficult because hierarchical levels and professional privileges have to be kept in mind.

Especially in healthcare, there are widely acknowledged boundaries between different hierarchical levels and different professions, who all have their own views of what is right and don't cooperate effectively (Papadopoulos, 2008) (Glouberman & Mintzberg, 2001) (Spear, 2005). Mintzberg & Glouberman (2001) point out that these differences are very hard to overcome, because they have developed over a long time. The same view is advocated by Jonson & Strand (2008), who state that the different professions in the hospital have different ways of working amongst themselves, which makes it hard to cooperate effectively, if they are to work together.

The assistant nurses are at the bottom of the hierarchy, where they have a strong team spirit and work more as a collective than individually. They don't strive after change, as they fear to be the ones left out. The nurses work together with each other and with both assistant nurses and doctors; however, individuality plays a larger role for them and they generally strive for change. The doctors, as the last profession mentioned clearly draw a line between themselves and other professions. The influence of gender and hierarchy is very strong in this profession and the doctors are usually averse to change, as they enjoy the position they hold and don't want to jeopardize their supremacy.

In order to integrate these different views and privileges into the change process, distributed leadership has been found to be particularly effective for change processes in healthcare. (Chreim, Williams, Janz, & Dastmalchian, 2010) This means that not only one person is leading the change but that several people fulfill different roles throughout the change process. Through this, all stakeholders have a contact person, who they feel comfortable with, who is in the same position as they are. Therefore, they are more likely to follow the change process.

4 Methodology

This chapter describes the methods that were used during the study. The description of the research approach mentions the research strategy, design and methods that were used, while the description of the data analysis mentions the different approaches to the literature search that were taken. The description of the data analysis gives an overview of the steps that were taken to determine relevant factors in the implementation of process management in healthcare. The last section provides critical remarks on the chosen methodical approach.

4.1 Research approach

As Bryman & Bell (2007) mention, the appropriate research approach should be chosen depending on the research questions. They suggest giving thought to the research strategy, the research design and the research methods.

This thesis uses an inductive approach, which means that new theory is generated from data. (Bryman & Bell, 2007) This is in line with a qualitative research strategy, which is associated with language-based approaches to the collection of qualitative data and deals with the collection and qualitative analysis of texts and documents. (Bryman & Bell, 2007)

The research design presents a framework for the collection and analysis of data (Bryman & Bell, 2007) and in this case is a case review. This not only incorporates the advantages of case studies or comparative case studies, which are very rich data on the examined case and the comparison to other cases, but also adds cross-sectional elements, because the selected case studies include different experiences and opinions.

Resulting directly from the research design, the research method includes techniques that are used for data collection. In this case, they are mainly literature searches, because no on-site data is collected during the process but rather available data is being analyzed in new ways.

This approach also allays any ethical concerns, because no data is being collected. It can be assumed that the data that is used has been collected with no ethical objections, as all articles have made their way into respected journals and thereby have been made public. Some questions might be raised with regard to the additional interview data that was used in this thesis; however all interviews were conducted with the interviewees knowledge and

consent and no one has been forced to participate. Consequently, no ethical objections can be raised in this regard either.

4.2 Data collection

The data collection for this thesis consists mainly of a literature search; however the literature for the theoretical background and literature for the case review were identified with different approaches.

4.2.1 Literature for the theoretical background

The literature search for the theoretical background was an ongoing process throughout the whole thesis. In accordance with Hart (2005), two different areas were searched. Firstly, literature on research methodology and data collection was reviewed. Information was collected about different research strategies and designs as well as how to conduct a proper literature review. Secondly, a general search for literature relevant to the topic was conducted. In the beginning, this was mainly literature on process management and process management in healthcare. Later on in the process, the scope was expanded to include literature on background information on issues that had been identified as relevant during the case review, such as lean management and change management.

The main sources of information on research methodology and data collection were different books, given that those usually include a good overview of a certain topic. The fact that they may be a little outdated because of the time it takes to print and distribute them is not relevant for such knowledge which only changes seldom. (Hart, 2005)

There also emerged some books that were central to a certain topic; however much more information was gained from journal articles. In that case, care was taken to mainly use refereed journals with a good reputation in order to keep a high and reliable standard of information. (Hart, 2005)

4.2.2 Literature for the case review

The literature for the case review was only collected, when a decision about the research methodology and the research questions had been reached. Even though the topic is related to medicine, google scholar was chosen as the database to search instead of a specific medical database. This was decided because google scholar contains more scientific papers (Umefjord, 2010) and is not limited to one specific area of knowledge. With this approach, it was made sure that for example articles on process management in healthcare published in

management journals were not left out of the search. Figure 1 shows the process with which the literature for the case review was derived.

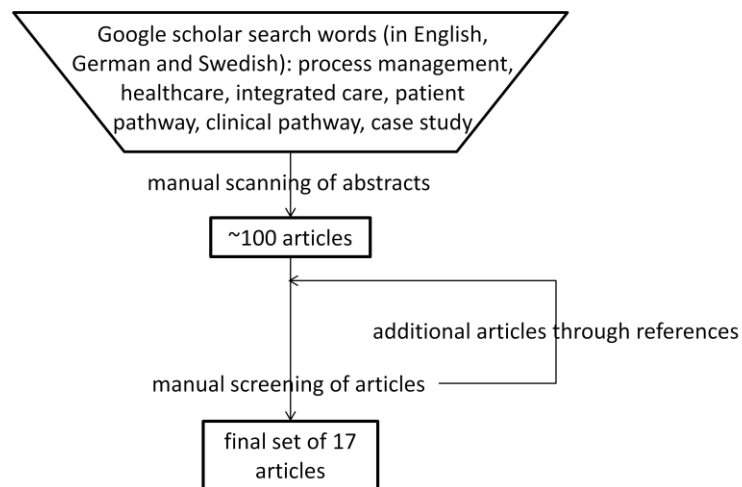


Figure 1: Derivation of literature for case review

The search terms that were used were “process management & healthcare”, “integrated care”, “patient pathway”, and “clinical pathway”, always in combination with the term “case study” as case studies were the kinds of articles that were needed. Additionally, the search terms were entered in English, German and Swedish in order to extend the number of articles that were included in the search.

The titles and abstracts that google scholar provides were then scanned manually and promising articles were scrutinized further. Considering that google scholar ranks the results by relevance, only the first couple of hundred abstracts were scanned, assuming that all relevant articles would appear there. After having identified the first relevant case studies, the references on those were used occasionally to find more literature.

With this approach, approximately 100 articles were identified as possibly relevant and their full texts were obtained. Several articles were not included in the final set because their contexts were very different from the one at Skaraborg hospital (which is to serve as a comparison). Also many times the search terms only appeared accidentally in the text and the main focus of the article did not coincide with the focus of this thesis. Articles were added to the resulting set on the basis of references within the already obtained articles until theoretical saturation (Bryman & Bell, 2007) was reached, which means, articles were added until no more new information could be identified by adding another article. For this an objective decision has to be taken at what point additional case studies will not provide

fundamentally new information. Following this method, a resulting set of 17 case studies was eventually identified and then analyzed further for the case review.

As could be expected, the main sources of information in this case were articles from several kinds of journals, medical as well as management ones. In addition, research reports – also printed in journals – provided valuable information. This means that the information collected will be fairly recent (Hart, 2005), which of course is important when compiling a list with relevant issues for process management in healthcare.

4.2.3 Additional data

As was mentioned before, this study is part of a larger research project at Skaraborg hospital. Therefore, the data on the hospital was already available and did not have to be collected by the author of this thesis. 22 interviews with employees at Skaraborg hospital had been made and were used to gain an impression of the situation at the hospital. The interviews were semi-structured² and took about 1 - 1,5 hours each. The interviews were held between June and November of 2008 and the questions in all interviews were posed by the same interviewer, who is also leader of the research group. The questions dealt with the introduction of process management into the hospital, i.e. what had been done, who had been key to the development and how the interviewee felt about the results of the initiative. The interviewees came from the top management and two different divisions within the hospital and therefore occupied different hierarchical levels. They all had experience with and/or an opinion on process management in their local context. The interviews were all recorded and later transcribed verbatim. These transcripts were then used by the author of this thesis to get insights on process management at Skaraborg hospital. In addition, official publications and papers from Skaraborg hospital were used and analyzed for the same purpose.

4.3 Data analysis

The 17 selected case studies were read through carefully and key findings were marked. To get a better overview, a word document was created, including all case studies and their attributes, such as publication year, country of origin and of course the key barriers and facilitators (together “key findings”) they encountered. Figure 2 shows an illustration of the analysis approach that was used for this thesis, which will be explained further in the remainder of this section.

² This means, an interview guide with specific questions is used, but there is a possibility to depart from this guide, if deemed necessary. (Bryman & Bell, 2007)

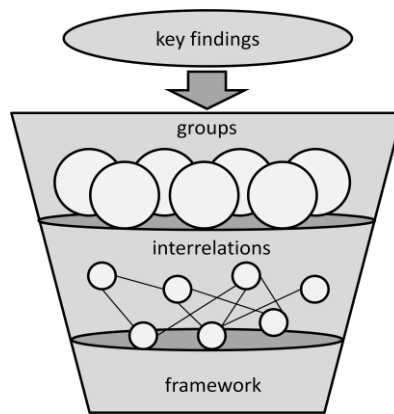


Figure 2: Analysis funnel

In order to organize the mentioned key findings, an approach was used that takes inspiration from both coding - the key process in grounded theory (Bryman & Bell, 2007) - and the KJ method (Alänge, 2009). This was done because the more than 100 key findings had to be organized into a framework. Grounded theory means simultaneously searching and analyzing data while specific topics are developed that frequently appear in the data. (Bryman & Bell, 2007) The KJ method on the other hand seeks to group a small number of issues and then find interrelations between these groups. Combining aspects of these two approaches helped organize the key findings for this thesis.

Firstly, the key findings of the case studies were written on individual pieces of paper, which is in concurrence with coding, where data is broken down into parts in order to analyze it. However, each key point was only grouped once, not assigned to several concepts as in the original grounded theory. The grouping by topic is suggested by the KJ method and includes the essential characteristics of the KJ method, which are the visualization and the grouping of data (Alänge, 2009). The groups that were derived by this approach are the eight relevant areas that make up the framework.

In order to arrive at the actual framework however, the groups were organized in the next step, taking relationships between them into account. This framework was the final result of the analysis process and has the purpose to guide a healthcare organization, after having decided to implement process management. At the same time, the case studies were read through again with the newly developed framework in mind. This was done in order to develop it even more thoroughly. Figure 3 gives an impression of the execution of the analysis. It shows the stage in which the different key findings have been sorted into groups, but before these groups have been organized into the final framework. The white pieces of paper represent the many key findings while the green pieces of paper contain the topic that

all key findings underneath have in common. These common topics are identical to the areas in the framework which will be described in more detail in the next chapter.

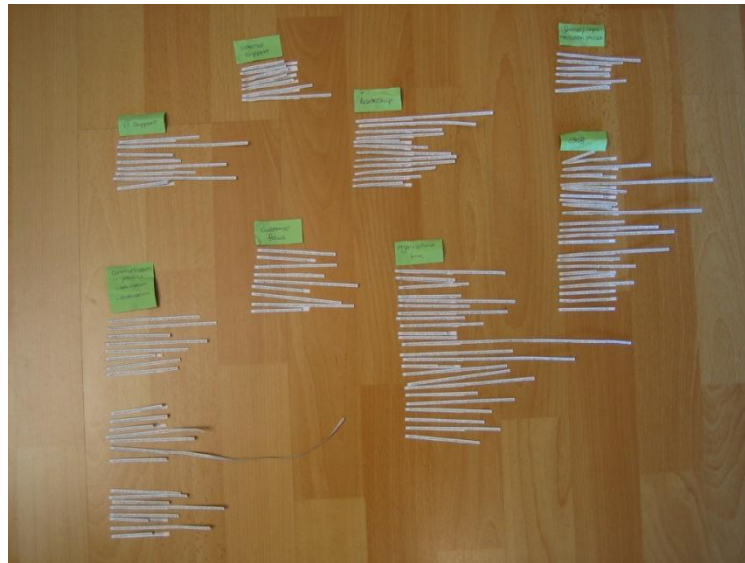


Figure 3: Results of the analysis

This approach was chosen mainly because of its “bottom-up” method, meaning that the themes are allowed to emerge rather than forcing the data into pre-existing notions. This is also one of the main advantages of coding. It was decided not to use either approach as is, because of different reasons. The number of key factors was much higher than the recommended number for the original KJ method (Alänge, 2009). Also, an important characteristic of the KJ method is the use of it in a group. In this case however, one single individual dealt with the analysis of the data, seeking confirmation only after the process was done, so only certain characteristics of the KJ method were used. Not using the original grounded theory approach was decided because the available timeframe did not allow simultaneously collecting and analyzing new data. Therefore, instead of continuously going back and forth between collection and analysis, the two processes were conducted sequentially. However the results of the analysis are still similar to those of grounded theory, namely concepts with properties and the relationships between them.

The approach that was used can be seen as an analysis funnel as represented in Figure 2. A lot of data goes into it in the beginning and is condensed into only a few well described concepts. Those are then organized into a theoretical framework of what to do, when implementing process management in healthcare. The second read-through of the case studies ensures that the determined concepts are well-established.

4.4 Critical assessment of the methodical approach

The data collection includes subjective choices at different times during the process and is therefore hard to replicate. However considering that theoretical saturation was sought, all relevant information can be expected to be included in the final framework. Several issues are brought up in more than one article, making it irrelevant, which one is actually used in the end. Therefore, even though the same result set may not be reproducible again, the inherent information could well be replicated by a similar search.

This duplication of information in several articles also gives internal validity to the results, because they have been reached by triangulation (Bryman & Bell, 2007). This is inherent in a case review, because the same information is provided by different sources, corroborating the results. The external validity (Bryman & Bell, 2007) is also rather high, because many case studies were compared, together giving an exhaustive picture of the implementation of process management in healthcare, which can then also be generalized to other situations. However, the generalizability of course only extends to the healthcare sector, as this was a prerequisite of the study.

The data analysis has a weakness in so far that it was only performed by one individual. However, frequent feedback from other individuals was used during the process, minimizing the danger of a bias in the results. The resulting framework can therefore be expected to be reproduced with a similar approach, giving it external reliability (Bryman & Bell, 2007).

Questions can be raised with regard to the additional interview data that was used for this thesis because it was not actually collected by the author but by someone else. This could result in the fact that some information got lost in the hand-over process, such as body language of the interviewee. In addition, the author of this thesis did not have the opportunity to ask clarifying questions of the interviewees. However, the interviewer was also the advisor for this thesis, so input and clarifications could be sought if necessary.

The fact that the questions were all posed by the same person gives the results high validity because they were all arrived at in the same way. The fact that the interviews are not particularly recent on the other hand might mean that things have changed in the meantime. Owing to the nature of this thesis in not being able to collect on-site data because of distance to the hospital, this had to be accepted. However, for the general applicability of the framework it has no impact because only the appraisal of Skaraborg's performance was based on the interview data.

5 Data analysis of the theoretical case

In this chapter, the case studies are analyzed in order to determine what barriers and facilitators may come up when implementing process management in a healthcare organization and what needs to be done in order to increase the chances for success. Firstly, the selected case studies are introduced and secondly, the developed framework, which represents the analysis of the case studies, and all its aspects are explained.

5.1 Selected case studies

All in all, 17 case studies were selected and analyzed. During the collection of the articles, it became clear that a pure implementation of process management was rare. Usually, the focus on processes was implemented in combination with some kind of quality initiative. Also, there were different terms, describing the same phenomenon. The most common name for process management was pathway, which seems to be the term of choice in healthcare. Only three papers actually called the initiative process management (or very similar), while eight used the term pathway in one form or another. The remaining 6 papers dealt with process management in the wake of implementing some extensive quality initiative at their hospital.

Approximately half the case studies were observed in either the US or the UK; the remaining case studies took place in Germany, New Zealand, Ireland, Switzerland, Sweden, the Netherlands and Canada. Most of them were written in English, some in German. Of course, this is due to the search method, where English, German and Swedish key words were searched. The reason why no Swedish papers are in the final set is most likely the tendency of Swedes to publicize in English to make their work accessible to the broad public. In Germany, this tendency is not as pronounced, because the part of the research community able to read German is much bigger.

Almost all the papers were journal papers from various journals. Even though most of the journals can be attributed to the medical field, some also deal with general management or operations issues. This of course goes to show, that the issue of process management in healthcare is a relevant topic in many different areas of research.

Looking at the years in which the articles were published also shows that this topic is a fairly recent one and that interest in it is still strong. The oldest paper is from 1996 and all but three papers have been published in the last 10 years. Over time, the interest actually seems to have increased, going by the disproportionately high number of papers from the year 2010.

They account for almost approximately 30% of all papers (5 out of 17). This can be seen in Figure 4, which shows the high number of articles from 2010 compared to all the other years. One case study was published in two parts in two consecutive years, which is why 18 publications appear in the figure rather than just 17.

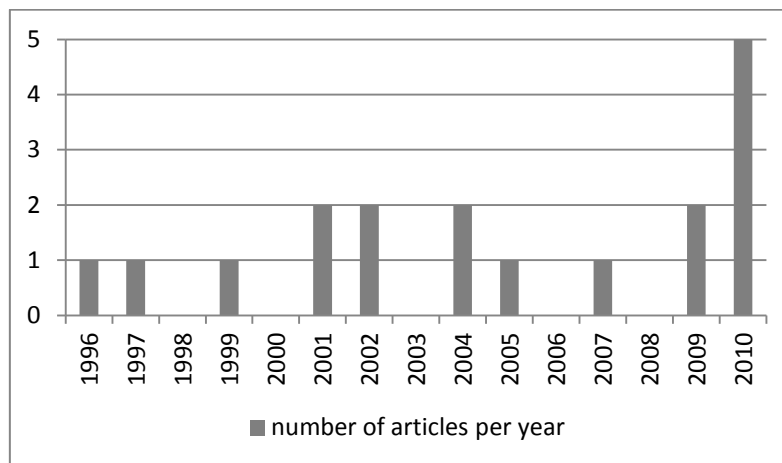


Figure 4: Distribution of articles by year

Table 2 gives an overview over the case studies and some of their attributes, including the authors and the countries of origin.

name of the paper	author(s)	country	type of paper	type of research	year	main focus
Implementierungsstrategien klinischer Pfade – Barriereorientierte Interventionen am Beispiel „Proximale Femurfraktur“	F. C. Bieber	Germany	inaugural dissertation	case study	2010	Behandlungspfad
Value and value chains in healthcare: a quality management perspective	D. Walters & P. Jones	New Zealand	journal paper (The TQM Magazine)	case study	2001	value chain / clinical pathways of care
Use of Lean in the Emergency Department: A Case Series of 4 Hospitals	E. W. Dickson, Z. Anguelov, D. Vetterick, A. Eller & S. Singh	US	journal paper (Annals of Emergency Medicine)	multiple case study	2009	Lean
UK health visiting: challenges faced during lean implementation	A. J. Grove, J. O. Meredith, M. MacIntyre, J. Angelis & K. Neailey	UK	journal paper (Leadership in health services)	case study	2010	Lean
The ICON Model – A Case Study for Developing Integrated Care in Ireland	H. Tucker, V. Larkin & M. Martin	Ireland	journal paper (Journal of Integrated Care)	case study	2004 / 2005	integrated care / care pathways

Process Transformation: Limitations to Radical Organizational Change within Public Service Organizations	T. McNulty & E. Ferlie	UK	journal paper (Organization Studies)	multiple case study	2004	business process re-engineering
Behandlungspfade als Qualitätsmanagement-Instrument	C. Weßel	Switzerland	Inaugural dissertation	case study	1999	Behandlungspfad
Experiences of implementing process management: a multiple-case study	K. Palmberg	Sweden	journal paper (Business Process Management Journal)	multiple case study	2010	process management
The evaluation of the introduction of a quality management system – A process-oriented case study in a large rehabilitation hospital	W. H. van Harten, T. F. Casparie & O. A. M. Fisscher	the Netherlands	journal paper (Health Policy)	case study	2002	quality management system
Organizing vocational rehabilitation through inter-organizational integration – a case study in Sweden	U. Wihlman, C. Strålsby Lundberg, I. Holmström & R. Axelsson	Sweden	journal paper (International Journal of Health Planning and Management)	case study	2010	integrated care
Implementation of Total Quality Management: Conventional Wisdom versus Reality	H. Boerstler, R. W. Foster, E. J. O'Connor, S. M. Shortell, J. M. Carman & E. F. X. Hughes	US	journal paper (Journal of Healthcare Management)	multiple case study	1996	continuous quality improvement
Process-based organization design and hospital efficiency	A. Vera & L. Kuntz	Germany	journal paper (Health Care Management Review)	regression analysis	2007	process-based organization design
Computer-integrated operations: the introduction of a hospital information support system	S. Procter & A. D. Brown	UK	journal paper (International Journal of Operations & Production Management)	case study	1997	hospital information support system
Change agency in a primary health care context: The case of distributed leadership	S. Chreim, B. E. Williams, L. Janz & A. Dastmalchian	Canada	journal paper (Health Care Management Review)	case study	2010	multi-disciplinary primary health team
A case study evaluation of implementation of a care pathway to support normal birth in one English birth centre: anticipated benefits and unintended consequences	D. E. Bick, J. Rycroft-Malone & M. Fontenla	UK	research paper (BMC Pregnancy and Childbirth)	case study	2009	care pathway
A case study in mental health informatics: barriers and attitudes to information support for integrated care pathways	J. Goddard, A. Alty & A. Gillies	UK	journal paper (Healthcare Computing)	case study	2001	integrated care pathway

Barriers to Successful Implementation of a Clinical Pathway for CHF	K. Beckman Pace, S. Sakulkoo, N. Hoffart & A. Kuckelman Cobb	US	journal paper (Journal for Healthcare Quality)	case study	2002	clinical pathway
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Table 2: Overview over the case studies

As can be seen from the table, some of the papers reported the results of not only one but multiple case studies. Therefore, the number of cases that the framework is built on, is actually higher than 17, increasing its relevance.

5.2 Framework

Using the approach that was described in the last chapter, a framework was developed during the analysis of the case studies, which highlights all the aspects that need to be considered, when implementing process management in a healthcare organization. This framework can be seen in Figure 5.

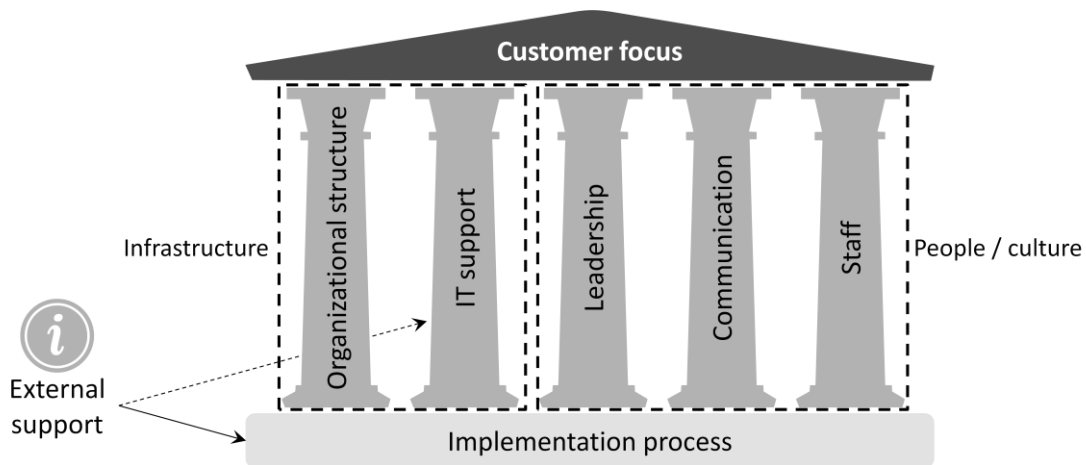


Figure 5: Framework for process management in healthcare

The framework has to be read from bottom to top. The lower part of the framework is a one-time occurrence, which naturally has to take place first and provides the basis for everything else: the process management has to be implemented, ideally using external support. Building on this are the different pillars, which are those factors that have to be in place continuously and have to be checked regularly. Organizational structure and IT support together constitute the infrastructure that is needed in order for process management to last in the organization. Leadership and staff as well as the communication between them make up the people and their culture, which are at least as important for the success of process management in healthcare as the infrastructure. An extensive description of each of the factors will be made in the following sections. At this point, only the interrelationships between the factors will be mentioned.

The focus for the whole organization is the customer and his needs. High quality products, or in the case of healthcare services, are to be delivered. The notion of quality has to be oriented on what the customers want, not what some official thinks they need. This is why customer focus is depicted as the roof of the framework; the basis and all pillars are needed to support this ultimate goal.

The relationship between leadership and staff is complicated because there are a lot of psychological factors involved. However, the most important factor for it is the communication between the two groups, which has to go in both directions. Also, the organizational structure, the leadership, the staff, the communication and the IT structure are all equally important for success. For this reason, they are all on the same level in the framework.

As was already mentioned, an implementation process, preferably a formalized one, has to be followed prior to using process management in healthcare. Therefore the relationship between implementation process and infrastructure and people/culture respectively only represents the chronological sequence.

The external support refers to various possible groups such as a consulting agency, helping during the implementation (represented by the arrow from external support to implementation process) or a provider of IT solutions, continuously supporting and updating the IT system at the hospital (represented by the arrow from external support to IT support). The latter group is not necessarily present, as the capabilities for designing and maintaining an IT system might well be present internally in the hospital. This is why the arrow is dotted instead of continuous.

5.2.1 Implementation process

The implementation process is the first step towards having process management in healthcare. The quality of this implementation process is highly relevant for the success of the initiative (Bieber, 2010). Bick, Rycroft-Malone & Fontenla (2009) state that implementation of the pathway they studied should have been more formalized. They agree that this would have contributed to a more successful introduction of the pathway. Thorough planning is particularly necessary, because hospitals are inherently inert, especially because of resistance from staff (Bieber, 2010).

This is also why social processes that will take place during the implementation need to be anticipated and planned in advance (Procter & Brown, 1997). In their study, this applies to

the different requirements producers and users have with regard to an IT system. However, it also applies with regard to changing roles that come up during the implementation of process management and the resistance to change in general. Upfront planning is therefore crucial to overcoming barriers to new organizational forms (Grove, Meredith, McIntyre, Angelis, & Neailey, 2010).

It is also important to take the prevailing conditions at the hospital into account. As McNulty & Ferlie (2004) put it, “history can play an important role as antecedent conditions may determine the fate of the change program” (p. 1397). First, it needs to be determined, if the abstract concept that is to be implemented is actually supported by the conditions at the hospital. Then, the concept needs to be individualized and adapted to fit those conditions. Taking the exact same approach from another healthcare organization will most likely result in failure, because no two organizations are ever exactly the same.

Bieber (2010) suggests the implementation procedure introduced by the Scottish Intercollegiate Guidelines Network (2001), which also includes thorough planning of the process:

1. Select an interdisciplinary team to be responsible for the implementation.
2. Determine the current situation in order to uncover possible barriers.
3. Include all staff and ideally some patients in the development and prepare everyone for the change so they have positive attitudes towards it.
4. Decide how to implement the change, taking into account the barriers that have been identified.
5. Make a schedule including times and actions and the names of the persons in charge for each step
6. Give feedback while implementing in order to be able to adapt, if complications should arise.

As can be seen, the planning of the implementation alone, not taking into account the implementation process itself, requires a lot of knowledge, time and energy. For this reason, it is advisable not to go through with such a project alone, but seek help from outside the organization.

5.2.2 External support

Several case studies report that the healthcare organization under observation used help from external consultants in order to implement their new regime (van Harten, Casparie, &

Fisscher, 2002), (Palmberg, 2010), (McNulty & Ferlie, 2004), (Tucker, Larkin, & Martin, 2004), (Grove, Meredith, McIntyre, Angelis, & Neailey, 2010), (Dickson, Anguelov, Vetterick, Eller, & Singh, 2009). In all cases, this was seen as a positive factor. As was mentioned before, the implementation process requires a lot of resources, as well as a thorough understanding of the principle to be implemented (Grove, Meredith, McIntyre, Angelis, & Neailey, 2010). As this can't be expected to be present within the organization, externals can be a valuable asset.

In the framework, it could be seen, that external support could not only be used in one-time incident for the implementation but also continuously with regard to the IT support within the healthcare organization. Of course this is not necessary, if the hospital is able to provide an IT system in-house; however getting an external provider may be particularly beneficial, because designing IT systems is not the core competency of a hospital.

If an external provider is chosen, it needs to be ensured that the relationship with them is good (Procter & Brown, 1997). Naturally this also applies to the consulting agency; however the relationship with the IT provider is longer-lasting and if it is bad it can have serious consequences. It needs to be seen to it that the expectations of both involved parties towards the system are met. The provider will probably want to develop a system that can be offered to other hospitals as well (resulting in a very general system), while the healthcare organization will want to have a system that is as closely tailored to their needs as possible. This gap provides enough room for critical issues and if the relationship to the provider is bad, the resulting IT system may not be applicable at all in the end.

5.2.3 Customer focus

As was mentioned before, the focus on customers is the whole reason why process management is implemented in a healthcare organization. The total value expectation of the customer is the starting point from where to develop a holistic structure for producing said value (Walters & Jones, 2001). Wihlman et al. (2010) report that in the organization they observed, a professional decided, what the customers needed, which was one reason for the bad results of the initiative. Of course the contrary should have been the case because having the customer in focus is imperative for good service quality (Weßel, 1998). The healthcare organization has to have a clear understanding of who their customers are and what they want in order to be able to deliver that (Grove, Meredith, McIntyre, Angelis, & Neailey, 2010).

Walters & Jones (2001) mention that the patient has to be an “integral part of the value chain” (p. 320), which means that an ongoing dialog has to be kept with him and service needs to be an underlying feature of the hospital. Grove et al. (2010) even suggest that targets, which are meant to evaluate the quality of the process, should be focused on the “soft” issue of patient satisfaction, rather than hard numbers such as time in the hospital or operating time. In relation to this, Dickson et al. (2009) discovered that patient satisfaction is the most resistant to change. The people responsible need to bear this in mind, when trying to determine, whether or not an implementation was successful.

5.2.4 Organizational structure

The organizational structure is part of the infrastructure that needs to be in place for process management to be sustainable. Of course process management is an organizational structure in itself but this section deals with specific aspects of it. Process orientation has been found in a regression analysis to be correlated to hospital efficiency and improvements in efficiency mainly result from process optimizations (Vera & Kuntz, 2007). This alone is reason enough to look into how to adopt it.

In order for process management to stick, the core processes must be identified and they must be regarded as inter-organizational (Walters & Jones, 2001). This means that the processes are not only identified within one department but through all departments that are involved in caring for a certain kind of patient. It is even advisable to include external events in the process, such as the referral from a doctor to the hospital or the supply of certain material (Walters & Jones, 2001). This holistic view then also calls for an inter-organizational performance planning system (Walters & Jones, 2001), which sets targets for every part of a process.

This process-oriented organization stands in contrast to the functional organization, which traditionally prevails in healthcare organizations. As van Harten et al. (2002) amongst others concluded, a change from functional towards process-oriented organization has to be made, if the advantages are to be taken advantage of. McNulty and Ferlie (2004) report that in the organization they observed the processes were implemented within the constraints of the functions, which eventually led to a failure of the whole initiative.

However the prevailing opinion in the case studies was that a complete transition towards process-orientation is not the best choice. Wihlman et al. (2010) mention that healthcare demands vertical (functional) and horizontal (process-oriented) organization. The missing

communication in horizontal direction was one main reason for failure in the case they observed. Vera & Kuntz (2007) agree with this assessment and state that organizations are not either process-oriented or functional, but rather “process-oriented to a greater or lesser degree” (p. 56). Palmberg (2010) also observes in her case studies that the best way is to combine functional and process-oriented organization forms in a matrix organization. Of course this leads to conflicts between functional and process managers; however the discussions that result from this increase the quality of the solutions that are found (Palmberg, Experiences of implementing process management: a multiple-case study, 2010). This of course can be attributed to the fact that a compromise has to be found, which suits both parties and gives the optimal result for the patient.

As can certainly be imagined, the organizational structure that is deemed appropriate then has to remain constant. Everyone needs to get acquainted with it and know they can depend on it being there. In the case that Wihlman et al. (2010) report on, the organizational structure was changed to some degree, whenever a conflict came up. This of course not only keeps the conflict from actually being solved but it also makes the staff highly insecure. Naturally, the implementation of integrated care in that case study resulted in a failure. Tucker et al. also identified a clear structure (2005) and a transparent and inclusive organizational design (2004) as important factors for a process-oriented organization.

One way to organize a hospital in a process-based way are pathways (Vera & Kuntz, 2007). Those always focus on one specific group of patients and consequently incorporate criteria for inclusion and exclusion of patients respectively. They then give an indication how diagnosis, treatment and care should be performed; however they do leave room for deviation, if it can be justified (Weßel, 1998). This means they are no substitution for the clinical judgments of care personnel (Bick, Rycroft-Malone, & Fontenla, 2009). Still, they provide standards for working that are very important for good quality of care and give care personnel more confidence (Weßel, 1998) (Bick, Rycroft-Malone, & Fontenla, 2009). As pathways are the healthcare interpretation of process management, they present the basis for regular process optimization and therefore need to be (re-)evaluated regularly (Weßel, 1998). In other words, not only the resources in the hospital must be managed, but also the acquired knowledge, in order to retain it and keep it up to date (Walters & Jones, 2001).

Of course, there are specific characteristics in healthcare that need to be considered, when designing such pathways. For one, high process variability complicates value-stream mapping, which is needed to design pathways. However, Grove et al. (2010) find that

healthcare organizations are not necessarily more complex than manufacturing organizations. Manufacturing organizations only have more standardized processes, which consequently also should be a goal for healthcare organizations. For another, waste is especially difficult to determine in healthcare processes, as it is completely engrained in the process from decades of working a certain way (Grove, Meredith, McIntyre, Angelis, & Neailey, 2010). Related to this, the bureaucratic documentation procedures that are predominant in healthcare have been found to present a barrier to the implementation of process management (Palmberg, Experiences of implementing process management: a multiple-case study, 2010). Additionally the political and ethical obligations of a hospital as well as the fact that the treatment process can include steps before and after the actual hospital stay present challenges, when implementing process management (Vera & Kuntz, 2007). Lastly, the status of medical professionals and the traditional hierarchy in healthcare offer ample room for conflict; however these aspects will be discussed further in the sections on staff and leadership.

One aspect that should receive special attention when implementing process management is the fact that business processes and the way financial resources are dealt with will have to change as well. Budgets have to be redesigned to fit the initiative (Tucker, Larkin, & Martin, 2004) and cost accounting and financial controlling have to be adapted as well. One way to have a cost accounting that is supportive of a process-base organization is activity-based costing (Vera & Kuntz, 2007), which means that each activity in the process is assigned an appropriate cost, the addition of which then provides the cost for the complete process.

When an organization is changing towards process-orientation, it is important that the change progresses with approximately the same speed in all areas of the organization (McNulty & Ferlie, 2004). If process management in one specialty is much further developed than in another, the results of the former will be dampened by the lack of change in the latter. Similarly, the rate of change in business and medical processes must be more or less the same, if the best results are to be achieved.

5.2.5 IT support

IT support is the other part of the infrastructure, which is needed for a successful and lasting implementation of process management. The objective of the IT software is to make it possible for everyone involved in the care process to record information of the patient, which is then available for everyone. This way, the information flows easily from one person

to another and no redundant information is asked from the patient again and again, eventually annoying him.

A supporting IT infrastructure that facilitates the integration of tasks is one of the key factors of a holistic organization, which provides the best possible value to the patient (Walters & Jones, 2001). Goddard et al. (2001) agree by proposing that integrated care pathways demand an integrated electronic health record. By this they mean one document, which deals with a patient and is upgraded by everyone who is involved in his care, no matter where or when this particular task of care takes place.

The reasons for an IT system are twofold (Bieber, 2010). For one, patient information can be collected better. This includes a quick overview over valuable patient information and their status of care (Tucker, Larkin, & Martin, 2004) as well as a standardized way of data collection, which then increases comparability. If everyone involved in the care process records the kind of information they deem necessary in the way they see fit, different cases can't be compared as easily, when they were performed by different personnel. Additionally, bad handwriting has the potential to cause misunderstandings and even fatal mistakes. With a computer-based information collection, this problem source is eliminated.

For another, information on the care pathway itself can be incorporated into an IT system (Bieber, 2010). If the main steps of the care process are tied into the system, care personnel can continuously review background information for the current step if they are unsure about how or why to proceed. This is especially valuable in the process of implementation and for new personnel, who are still becoming acquainted with the specific process of care.

Related to this point, an IT system can also provide a listing of all available services and care personnel and their respective areas of expertise as well as their availability and their contact data (Tucker, Larkin, & Martin, 2005). This of course includes everyone, who can possibly be involved in the care process, meaning all professions and all locations, such as different divisions and possibly even care facilities before and/or after the hospital itself, if they are involved in the care process.

Recording standardized information in a reliable way also makes it easier to track results, which are used to evaluate the care process. A lack of adequate information for this is a major barrier to implementing a continuous quality initiative (Boerstler, et al., 1996). If no or only fragmented information is available, no conclusions can be drawn as to whether or not

the targets are reached and more importantly, where exactly the problem lies so it can be eliminated.

When designing an IT system, care needs to be taken to find a suitable design for the purpose. The main focus of course should be on integrating different functionalities into one whole (Procter & Brown, 1997). This means that first all functions need to use the same system (or at least different modules of the same system) and then they all need the same accessibility to the system, allowing everyone to input information on the kind of care they have provided for the patient.

The development process of the IT system is a very important task because poorly developed software can have detrimental effects on the proceedings at the hospital (Procter & Brown, 1997). If the system doesn't work the way the staff needs it to right away, the staff will most likely work around it as they don't have time to figure out problems on the job. This means mainly that the menu should be intuitive (Bieber, 2010) and that the software needs to be reliable. Consequently, the development of an IT system can most likely not be done by the hospital itself but should be outsourced to an external provider. Some of the challenges when doing this have already been discussed in the section on external support.

One problem during the development phase can be that different professions have different requirements of the IT system and that the hospital will most likely have different kinds of software in different parts of the organization, which will have to be consolidated to (or substituted by) one holistic system. This of course often leads to dissatisfaction among the staff, who have to learn to work with a new program. It can therefore be seen that setting up the necessary IT infrastructure alone warrants thorough planning because there are many problems that can come up during the process and have to be anticipated beforehand.

5.2.6 Leadership

Good leadership is part of the culture at the hospital and is at the core of a good process management initiative. Leadership can refer to the different management levels throughout the hospital but also to individuals from staff, who take initiative and lead the organization towards process management.

It is generally agreed that at the very least, management support on all levels is necessary in order to successfully implement process management in the organization (Grove, Meredith, McIntyre, Angelis, & Neailey, 2010), although management doesn't have to initiate the move to process management (Boerstler, et al., 1996). This support is necessary, because in order

for process management to work, the people doing the actual work need to be responsible. This in turn means that managers need to give this responsibility to frontline care givers, who in turn have to feel that they are actually allowed to act on it (Dickson, Anguelov, Vetterick, Eller, & Singh, 2009). If some manager were unsupportive of the initiative, they would most likely not truly delegate power, eventually causing the initiative to fail. Therefore, a change in management style is imperative, if process management is to spread throughout the whole organization (PalMBERG, Experiences of implementing process management: a multiple-case study, 2010).

A similar reasoning applies to senior physicians as well, who traditionally hold a lot of power in the organization and therefore have the potential to halt the development towards process management, if they were of a mind to (McNulty & Ferlie, 2004). The involvement and engagement of clinicians has consequently been identified as a key success factor by many authors, such as Bieber (2010) and Vera & Kuntz (2007). One way of getting their approval is to involve them in the whole process and to incorporate their needs into the final “product”.

One thing that is very important for the success of process management is a visionary, who sees the desired state and keeps everyone else on track on the way there (Walters & Jones, 2001). This person doesn't necessarily have to be from senior management, although experience in business matters is certainly an important quality, as is a certain clout with other staff. They have the task to coordinate the different projects and keep the big picture in mind, which makes their job essential for the transformation towards process management (Chreim, Williams, Janz, & Dastmalchian, 2010) (Tucker, Larkin, & Martin, 2004).

Although a project coordinator is a very important asset, the transition towards process management in a health care organization is such a complex undertaking that not one single person could do the job alone. Chreim et al. (2010) suggest the term of “distributed leadership”. This means that several people exhibit leadership in one form or the other. Also, the constellation of leaders changes throughout the transformation process. The project coordinator for example is very important in the beginning, setting up the ultimate goal and starting the whole transformation. As the transformation moves on, the individual project managers become more important because they bring the big change to the whole organization in small pieces, while the project coordinator mainly keeps track of the developments.

One important observation that Chreim et al. (2010) made was that leaders don't necessarily see themselves as such. In addition to the cases where they were formally instated, there were many situations in which a leader simply emerged, without ever having actively chosen to become a leader. This can be explained by the fact that authority over others can stem from very different things (Chreim, Williams, Janz, & Dastmalchian, 2010). For one there is the formal authority, which develops from a hierarchical structure, where one person simply has the discretionary power over another person. In this case, people accept the authority because the leader has the influence to sanction them, if they misbehave. For another, there is authority, which stems from the ability to allocate resources. This is closely linked to formal authority, because people will accept this kind of power because they need something from the leader and therefore don't want to upset him. However, the hierarchical structure plays no role in this, as people from a low hierarchical level could technically have the ability to allocate resources. Another way to exhibit authority is through expertise. In this case, people will accept the power because they believe the leader to have knowledge superior to theirs and are therefore happy to go along with his decision. Lastly there is the capacity to build relationships and trust. In this case, the authority will be accepted, because people feel comfortable with the leader and trust him to make wise decisions.

Naturally, one person can use more than one way to exhibit authority; however this is only slightly relevant to the issue at hand. The main point to keep in mind is that the transformation process towards process management demands a transformational leadership in order to overcome possible barriers (Grove, Meredith, McIntyre, Angelis, & Neailey, 2010) and that this leadership can't be fulfilled by just one person.

5.2.7 Staff

Issues relating to the staff were brought up in every study, which goes to show that staff, as part of the hospital culture, is immensely important for the transition towards process management. Procter & Brown (1997) specifically mention that especially organizational culture and occupational ideology are very important, when dealing with integrated care.

There is general agreement that everyone, not only senior management, should be involved in the planning and implementation process, no matter their profession or hierarchical standing, in other words the initiative needs to be owned by the staff (Tucker, Larkin, & Martin, 2004) (McNulty & Ferlie, 2004) (Palmberg, Experiences of implementing process management: a multiple-case study, 2010). Wihlman et al. (2010) observed a case in which the organizational structure was continuously changed by top management and therefore

people did not feel involved in the change process. As can be expected, the initiative eventually failed as a result of insufficient involvement of everyone. Bick, Rycroft-Malone & Fontenla (2009) conclude that even non-hospital personnel, such as the patient or financial backers should be involved in the beginning, in stating their expectations of the project. This of course doesn't mean that every single stakeholder should be present in every meeting held with regard to process management but that spokespeople from each different group, who represent the needs of the respective group, should be actively involved in the decision making process.

Dickson et al. (2009) observed that progress towards process management is much slower and not as successful, if only frontline caregivers or managers are involved, once again supporting the fact that a successful implementation demands everyone's involvement. When comparing the influence of the two groups, they also discovered that the involvement of the frontline personnel is even more important than that of management. If they were the only group driving the transformation process, the result was better than when only managers were forcing through the new regime. This is of course because the frontline workers have to implement the changes suggested by management and if they don't believe in them, results will be scarce. This also means that frontline personnel need to be involved in the beginning, because they need to support the change and they also know best how things are currently done and where potential for improvement might be. If staff, especially frontline workers, is not motivated and satisfied with the project, the implementation process will not lead to the desired results (Dickson, Anguelov, Vetterick, Eller, & Singh, 2009).

Most authors mention that in order to sustain process management in the long run, interdisciplinary teams are necessary (Bieber, 2010) (Walters & Jones, 2001) (Tucker, Larkin, & Martin, 2004) (Weßel, 1998) (Beckman Pace, Sakulkoo, Hoffart, & Kuckelman Cobb, 2002) (Bick, Rycroft-Malone, & Fontenla, 2009). Van Harten et al. (2002) observed that the transformation towards process management was easier for hospitals, which were already used to working in multi-disciplinary teams. Taking into consideration that the goal of process management is to provide the best possible care to people with a specific illness, it is obvious that interdisciplinary teams are necessary to achieve this goal. An illness usually demands specific care from different doctors (possibly from different specialties) as well as care from nurses. Also, other areas of a hospital will most likely be involved such as a pharmacy or the radiology department. Representatives from all of these groups need to

work together, if the patient is to be cured. As was already mentioned in the chapter on organizational form, these interdisciplinary groups interfere with the traditionally functional structure of a hospital and therefore provide difficulties of their own.

The main issue is to build and sustain complete and consistent teams, because professional roles and the boundaries between them are great challenges (Tucker, Larkin, & Martin, 2004). Medical staff is usually not as supportive of care pathways as nurses are (Bick, Rycroft-Malone, & Fontenla, 2009) because they have traditionally enjoyed a great deal of freedom as to how to treat a patient. Having to give up some of the freedom and having to conform to certain rules is very hard for them (Boerstler, et al., 1996) (Vera & Kuntz, 2007). The older the people are and the longer they have worked in a functional organization, the harder it is to convince them to change towards process management and seemingly give up some of their self-determination (Palmberg, Experiences of implementing process management: a multiple-case study, 2010). This is why the other factors are so important: early involvement of medical professionals in the decision making processes and upfront planning help lessening the resistance towards the change and anticipating possible problems before they occur. Leadership that is built on respect rather than simple formality helps move the doctors in the right direction.

Also, trust between the different parties involved and a generally friendly climate within the organization are hugely important to successfully implement process management (Chreim, Williams, Janz, & Dastmalchian, 2010). Wihlman et al. (2010) observed a case in which the different authorities did not trust each other. Therefore, they kept working against each other and double- and triple-checking the others' work, rather than spending time on a productive joint effort. Consequently, the results from the initiative fell way short of what was expected in the beginning. Tucker et al. (2004) also observed that an environment of honesty and openness was a significant factor for the successful implementation of integrated care.

When implementing process management, new roles develop, such as process owners, which have to be filled with appropriate people (McNulty & Ferlie, 2004). Tucker et al. (2005) suggest that this development should lead to new job descriptions, not only for the newly created jobs but for all jobs. The focus on interdisciplinary teamwork should be incorporated into the search for new personnel. This also helps lessen the resistance towards process management, because people are specifically chosen with interdisciplinary teamwork in mind, although of course this effect would be anything but immediate as new

personnel are only sporadically hired. However, incorporating teamwork into the job descriptions would also mean that personnel are evaluated against this factor, rewarding people, who are performing especially well in this area and punishing those, who continue to work independently.

5.2.8 Communication

Communication in general is the way to exchange information amongst staff and leadership respectively and between the two groups. From the studied case studies, three different areas of communication emerged that are all very relevant when trying to implement and sustain process management in a healthcare organization. The three areas are the permanent presence of the process in question, the education of people about the process and the evaluation of the process in order to improve it continuously.

A care pathway has to be constantly present, so people don't forget its existence (Bieber, 2010). Also, continuously advertising the pathway suggests to people that management is interested in the pathway and its development. The initiative should be communicated throughout the whole organization in order to raise awareness for it and share information and views about the pathway (Tucker, Larkin, & Martin, 2004). Dickson et al. (2009) were led to the conclusion that posting process maps and other information in public areas made it accessible for everyone and helped the people recognize the results of their work. Bick, Rycroft-Malone & Fontenla (2009) observed in their case study that the absence of adequate documentation presented a significant problem during the transition.

Sharing the ultimate vision of the initiative makes sure that everyone has the same information and therefore helps overcome barriers to the transformation (Grove, Meredith, McIntyre, Angelis, & Neailey, 2010). This is more important the bigger the organization is, because in a small organization it is easier to have everyone on the same page, while in a big organization special care must be taken to actively inform everyone (Boerstler, et al., 1996). It can also be very helpful to identify and share best practice with regard to process management either by an internal division or by another hospital because it inspires people to follow suit and come up with own ideas (Tucker, Larkin, & Martin, 2004) (Grove, Meredith, McIntyre, Angelis, & Neailey, 2010).

Tucker, Larkin & Martin (2004) observed a case, where the initiative received its own brand. This made it a lot more memorable and helped people keep the key points in mind as the brand name was an acronym of the most important goals. No matter if this approach is

chosen or not, it is important to communicate the information in a way that all recipients understand it, meaning that a common language needs to be found for the different professions (Weßel, 1998). Using a unique brand is of course a very good way to achieve this.

There is general agreement that education of the employees about the process is necessary in order to sustain it (Beckman Pace, Sakulkoo, Hoffart, & Kuckelman Cobb, 2002) (Goddard, Alty, & Gillies, 2001) (Procter & Brown, 1997). Bieber (2010) judges the mentioned passive ways of education (just presenting the information) as ineffective when used on their own and gives examples of the kinds of educational concepts that work well: process audits are meant to examine processes as to whether or not they fulfill the requirements set upon them; interpersonal feedback gives an immediate possibility to judge a behavior and offer possible improvement suggestions; electronic reminders, usually placed within the IT system make sure that no important step is forgotten; interactive training in the pathway as well as support provided by a dedicated group through e.g. workshops give the employees the opportunity to get all their questions answered; on-site visits of mentors help them assess whether or not the employees actually work as they are supposed to.

Especially workshops have been identified as very relevant to the education process by other authors as well. Dickson et al. (2009) suggest to start with a kick-off workshop to introduce the finished pathway to everyone but then regularly meet in order to continuously improve the pathway that has been developed. Tucker, Larkin & Martin (2004) also suggest holding workshops but mention that these should always end with an action plan with the results being evaluated in the next meeting. Contrary to many other observations, in the case of Boerstler et al. (1996) not all personnel were trained at the beginning of the implementation but rather the training took place whenever a person needed it. This has the advantage that everyone has the possibility to use the new information right after they have learned it. It is very probable that the implementation process will take place successively throughout the organization. If people are trained in the beginning but then don't need to apply that knowledge, they will most likely forget it, making the training useless. Therefore people need to be informed that something is up from the very beginning but only actually trained in the new ways, when it is their time to implement the pathway.

Evaluating the results of pathways is crucial in order to determine whether or not the expectations have been met (Bieber, 2010) (Bick, Rycroft-Malone, & Fontenla, 2009) (Beckman Pace, Sakulkoo, Hoffart, & Kuckelman Cobb, 2002). The sooner in the process the

evaluation takes place the easier problems can be identified and adapted (Bieber, 2010). Evaluation is therefore crucial in order to continuously have a process that delivers high quality service to the patients (Weßel, 1998). Evaluation is also very important to determine whether people actually do what they say. It was observed that many times people claimed they were using a pathway when indeed they were not. Evaluating the use of the pathway by means of different criteria can ensure that this doesn't happen (McNulty & Ferlie, 2004) (Beckman Pace, Sakulkoo, Hoffart, & Kuckelman Cobb, 2002).

If small projects are tackled one by one, measurable results can be achieved in only a few months (Boerstler, et al., 1996). The complete implementation process will of course take longer than that but milestones along the way give an early indication of the way the transformation is going, present a good opportunity to make adaptations if necessary and boost peoples spirit by giving them small successes. However, when setting these milestone targets it needs to be considered that the conditions before the implementation influence the extent to which results will be reflected in the outcomes (Dickson, Anguelov, Vetterick, Eller, & Singh, 2009). The better the values are to begin with, the less potential is there for improvement.

5.2.9 Summary

The previous sections have given in-depth explanations on the different factors needed for a successful implementation of process management in healthcare as presented in the framework that has been developed from literature. A strong basis is needed in the form of a codified implementation plan, which ideally is developed using external support. During the implementation, the foundation stones need to be laid for the 5 pillars, which subsequently carry the execution of process management. These pillars are organizational structure and IT support (together making up the infrastructure) as well as leadership, staff and the communication within the organization (together forming the people and culture). All of them are equally important and all of them need to be revisited and reinforced continuously in contrast to the implementation, which is a one-time occasion, albeit an extended one. The basis and the pillars then carry the roof, which is customer focus and which is the most important motivation in process management in healthcare.

6 Data analysis of the empirical case

This chapter presents the analysis of the case of Skaraborg hospital. Firstly the situation at the hospital group is presented and secondly the developed framework is applied to the Skaraborg hospital.³

6.1 Situation at Skaraborg hospital

Skaraborg hospital is a group of hospitals situated in Western Sweden and serves a population of 260.000. The group is made up of the hospitals in Lidköping, Skövde, Mariestad and Falköping and offers acute planned care in 30 different medical specialties. Taking all four hospitals together, Skaraborg hospital has more than 800 beds and around 4.700 employees. In terms of output, it handles per year 41.000 inpatient stays, 204.000 outpatient visits by doctors, 19.300 surgical procedures and 2.300 births. The turnover of Skaraborg hospital is three billion Swedish crowns annually.

Skaraborg hospital is organized into four divisions: the division of Medicine and Psychiatry, Surgery, Women and Children Care and Lidköping hospital. The director of Skaraborg hospital serves as executive officer for all four hospitals. Underneath him, there are four division managers, who each oversee one division, including its different clinics. The clinics in turn are led by a clinical manager, in most cases a physician from the department. This vertical structure is very typical for Swedish hospitals.

The different clinics have been shuffled around repeatedly in the last decade, sometimes belonging to one division, sometimes to another with no clear explanation why this was done. This has led to confusion not only about the reasons behind the changes but also about the organizational structure, meaning who is responsible for which area and who does he have to report to.

Skaraborg hospital has been working with processes since the beginning of the century. The term process is widely spread throughout the organization and is commonly assumed to be something internal to it. In 2003 they introduced the balanced scorecard, which includes different aspects that need to be weight against one another so that they all receive appropriate attention. Included in it are also measurements such as how many cross-functional processes there are, which obviously try to gauge to what extent work is interdisciplinary.

³ All quotes that are presented in this context have been translated to English from the original Swedish by the author of this thesis.

6.2 Applying the framework to Skaraborg hospital

In this section the previously developed model is used to assess the application of process management in Skaraborg hospital. It is determined, which factors are already adequately addressed and in which areas there is potential for development.

6.2.1 Implementation process

The vision of Skaraborg hospital is “Good care in development”. It has long since discovered the importance of process management to reach this goal and has developed a strategic plan for process development, i.e. how to get to the desired state. An official document, the Skaraborg guide, exists that gives a very good description of how the hospital is being managed and more importantly why this is the case. Another official document (derived from the overall guide) includes a concise description of the desired state in the future, in this case a formulated target state for the year 2012:

“THE MOST IMPORTANT PATIENT STREAMS ARE IDENTIFIED AND IT IS UNDERSTOOD, HOW THEY INFLUENCE AND DEPEND ON EACH OTHER. THE PERMANENT PROCESSES ARE ORGANIZED AFTER THE MOST IMPORTANT PATIENT STREAMS, WHICH MEANS THAT THEY FOLLOW THE PATIENT ACROSS ORGANIZATIONAL BOUNDARIES, INTERNALLY AS WELL AS EXTERNALLY. EACH CARE AND SUPPORT PROCESS HAS A PERSON RESPONSIBLE FOR IT, A CLEARLY DEFINED GOAL AND IS CONTINUOUSLY BEING IMPROVED ACCORDING TO PATIENTS’ DEMANDS (SPOKEN/UNSPOKEN) AND EXPECTATIONS, WHICH TRANSLATE TO GOALS AND MEASUREMENTS. GOALS AND MEASUREMENTS ARE VISUALIZED IN ORDER TO CREATE INVOLVEMENT. AS FAR AS POSSIBLE, DECISIONS IN THE PROCESSES ARE BASED ON FACT, EVIDENCE AND KNOWLEDGE ABOUT VARIATION AND NON-VALUE-ADDING ACTIVITIES. WE CONTINUOUSLY REAPPRAISE DECISION BASES, PROCESSES AND ROUTINES BASED ON FOLLOW-UP, DISCUSSIONS AND ANALYSIS OF THE ENVIRONMENT. SKARABORG IS CHARACTERIZED BY A NON-PUNISHING CULTURE, WHICH STIMULATES LASTING DEVELOPMENT, WHICH IN TURN SUPPORTS CREATIVITY AND NEW THINKING AND WHICH INCLUDES ALL EMPLOYEES IN THE DEVELOPMENT WORK. GOALS AND MEASUREMENTS IN THE BALANCED SCORECARD ARE CONNECTED TO THE MOST IMPORTANT PROCESSES. IMPROVEMENT WORK IS BEING PRIORITIZED ON THE BASIS OF PATIENTS’ DEMANDS, PATIENT SAFETY, PATIENT SATISFACTION, SUBSTANDARD RESULTS, AVAILABILITY AND COST OF QUALITY DEFECTS. THERE IS A WELL-FUNCTIONING IT SUPPORT IN THE HOSPITAL FOR BALANCED BUSINESS CONTROL, FOLLOW-UP OF RESULTS AND IMPROVEMENT WORK. HEALTH IMPROVING ACTIVITIES, VARIETY AND EQUALITY ARE BEING RESPECTED IN ALL

ACTIVITIES.” (Lifvergren, Strategisk plan för processutveckling - Arbetsmaterial, 2009, S. 7)

In order to achieve this goal, steps have been identified and prioritized, which are to be executed at different points in time throughout the process. Examples for this are decisions when to focus on what kinds of processes and how target values of processes fit into the overall picture. Also, it is decided on what kind of educational methods are to be used for the employees on different levels.

Skaraborg hospital works with a balanced scorecard that gives an overall idea of what is important to the management and how everything fits together in the big picture. The scorecard includes long-term goals but also breaks down those into short-term success factors. It consists of the four perspectives Skaraborg hospital wants to focus on, which are patients, processes, employees and economy. The interviewees were all well aware of this medium and used it in their daily work.

“THE SCORECARD IS NOT ALL DOCUMENTATION I WOULDN’T SAY, BUT IN IT WE TALK ABOUT WHAT WE WANT TO ACHIEVE, SO IN IT WE HAVE SET OUR TARGETS AND OUR MEASUREMENTS FOR THE YEAR AND MORE LONG-TERM. AND WE’RE SUPPOSED TO FOLLOW THE HOSPITAL’S GOAL AND MEASUREMENTS, TOO. [...] I WANTED TO BRING MY SCORECARD WITH ME BUT I FORGOT.”

“AND THEN OF COURSE WE HAVE A CONTROLLING SET, DEVELOPMENT DIALOG, WHICH FOLLOW UP OUR SCORECARD.”

6.2.2 External support

Skaraborg hospital has not enlisted the help of an external consulting company for their implementation process. However, they have repeatedly sought help and advice from students and staff members at Chalmers University of Technology. One interviewee mentioned that employees from Skaraborg hospital often meet with people from Chalmers, which is a main reason for the fact that the hospital has the reputation of being very much focused on development. So what is used in Skaraborg is a long lasting cooperation between the hospital and several universities in order to repeatedly make use of the theoretical information that is studied in school and put it into action in a real environment. By doing this, theory can be tested in practice and the findings can be used to develop the theory further and find better solutions for Skaraborg hospital.

Skaraborg hospital is an active member of the Centre for Healthcare Improvement, which is an organization that drives quality improvement in healthcare. Also, Skaraborg takes part in several different research networks on different geographical levels. The relationship to Chalmers is so close that the situation arises in which an employee at Skaraborg hospital also works for the university. In addition, employees are given the opportunity to take part in practical courses at Chalmers, for example to be certified as Six Sigma Black Belts.

6.2.3 Customer focus

The focus on customers is central to everything that is done at Skaraborg hospital. Every interviewee mentioned the necessity to focus on customers (or in this case patients), which is also stressed in the strategic plan for the process development. Below there are just a few quotes from the interviews that show the presence of customer focus on everyone's mind.

“THIS KIND OF PATIENT, WHICH IS THE CUSTOMER - OR WHATEVER YOU SAY IN PROCESS LANGUAGE - BUT THIS IS OF COURSE THE PATIENT THAT IS OUR TARGET GROUP SO TO SAY.”

“SO YOU TAKE CARE OF THE WHOLE AND IT RESULTS IN FEWER VISITS FOR THE PATIENT AND THEY ARE MORE EFFECTIVELY CARED FOR.”

“WE HAVE EMPLOYEE-, WE HAVE PROCESS- AND WE HAVE PATIENT-PERSPECTIVE.”

“WE TRY TO THINK FROM A PATIENT'S PERSPECTIVE ALL THE TIME.”

“AND WHAT WE MEASURE TODAY IN OBSTETRICS [...] IS PATIENT SATISFACTION.”

These are only very few applicable quotes. Even those employees that did not explicitly mention patient focus implicitly always put their patient's needs first and justified their actions with the explanation that this or that was better for the patient.

However, at least one interviewee was not quite sure whether or not they were right in their interpretation of patient focus as the following statement shows:

“THE WAY I SEE IT - I MAY BE COMPLETELY WRONG - IT MEANS WE NEED TO FOCUS ON OUR CUSTOMER, FOCUS ON THE PATIENT, WE NEED TO COME BACK TO THAT.”

Nonetheless, most interviewees were well aware of the expression patient focus and the underlying assumptions it contains.

6.2.4 Organizational structure

Great care is taken at Sakarborg to map different processes. All interviewees talked about process mapping in one form or the other and they talk about it generally in a very positive way. One interviewee for example suggested that process mapping is very important:

“IF YOU DON’T DO THESE MAPS, I THINK IT’S VERY EASY TO MISS SOMETHING.”

The processes that are mapped are not only generated initially and then left to it but they are kept alive and revisited from time to time:

“[WE] MAP OUR PROCESSES AND TAKE CARE THAT THEY BECOME ALIVE, MEANING THAT THEY DON’T ONLY DIE AFTER WE HAVE DONE THE PROCESS MAPPING BUT THAT THEY REALLY LIVE, THAT WE WORK WITH THESE PROCESS IMPROVEMENT MEETINGS AND SUCH.”

Using official processes is seen as a kind of standardization, which makes the care process safer for the patients:

“AND I BELIEVE STANDARDS IN THIS CASE ARE CRUCIAL FOR A SAFER CARE.”

Processes are also meant as a communication tool to get everyone to agree on a certain process, so everyone is on the same page.

“NOW I THINK PROCESS MAPPING IS NOT SO MUCH THE PROCESS THAT IS ARRIVED AT IN THE END BUT RATHER THE PROCESS OF UNDERSTANDING HOW WE WORK, SO PROCESS MAPPING GIVES THE SAME UNDERSTANDING TO EVERYONE.”

“WE HAVE GONE THROUGH AND MAPPED THE PROCESS ALL TOGETHER AND HAVE ARRIVED AT AN UNDERSTANDING HOW WE SHOULD REGISTER PATIENTS AND THAT WE SHOULD ALL DO IT THE SAME WAY.”

However, keeping processes alive doesn’t work all the time, as this next quote shows:

“AND [THIS SUPPORT PROCESS] WAS NOT KEPT ALIVE, BUT I THINK NOW WE START TO TAKE IT APART AND THAT DOESN’T FEEL COMPLETELY RIGHT, BECAUSE I THINK WE PROVIDED A VERY GOOD BASIS [15 YEARS AGO]. I THINK WE SHOULD HAVE USED THAT MATERIAL AND KEPT IT ALIVE AND THEN ADDED NEW STUFF.”

Although all interviewees were familiar with the word process and they also had found a definition for themselves, a general definition from the top did not seem to exist among the employees.

“A PROCESS IS A WAY TO WORK. HOW YOU SHOULD STRUCTURE AND ORGANIZE YOUR WORK TO PROVIDE THE GREATEST POSSIBLE CUSTOMER VALUE.”

“WELL, YOU COULD SAY THAT THE WORD PROCESS, IT DOESN'T MEAN - THE WAY I SEE IT - IT DOESN'T MEAN THE SAME THING FOR EVERYONE AND THERE IS NO CLEAR DEFINITION RIGHT NOW. SO YOU CAN HAVE SLIGHTLY DIFFERENT INTERPRETATIONS OF WHAT A PROCESS IS AND WHERE THE ACTUAL BOUNDARIES ARE.”

The processes that are defined usually follow a patient across different wards, if necessary:

“NOW WE TRY TO CROSS THE BOUNDARIES, SO YOU CAN ACTUALLY SEE HOW THE PATIENT FLOWS THROUGH OUR ACTIVITIES.”

With implementing processes, new roles were established. The process owner for example has the power over resources, while the process manager leads the operative process improvement work. These new roles were unequally successful in the different divisions. In some cases, the definition of the role is quite clear and the role has remained in use over the years. In other cases, the roles disappeared again soon after they had been instated.

“[IN RENAL MEDICINE] THEY REALLY HAVE A GOOD UNDERSTANDING OF WHO SHOULD OWN THE PROCESS AND WHO SHOULD BE PROCESS LEADER AND WHO SHOULD BE INCLUDED IN THE PROCESS GROUP.”

“WE DON'T HAVE [PROCESS OWNERS] ANY MORE, WE USED TO. RIGHT NOW, WE'RE LAYING LOW.”

Even though many processes have been defined and their ownership is clear, employees still see Skaraborg as a line organization, albeit one with much process influence. The focus on processes goes so far that in the event of a problem between the process and the line owner, the process takes first priority. However, the ideal state is not one of sheer process focus but more a mixture of both approaches. The following quotes show this situation very well and also show that the interviewees have a good understanding of the organizational reality at their hospital.

“AND OF COURSE WE STILL HAVE A LINE ORGANIZATION. [...] THE INTERESTING THING THOUGH ARE THE BROKEN-DOWN PROCESSES BENEATH EMERGENCY AND PLANNED CARE. SO IT'S JUST A CHOICE OF PATH. BECAUSE YOU HAVE TO DO SOMETHING. SAME WAY WE STILL CHOSE TO HAVE A TRADITIONAL ORGANIZATION [...]. NOW IT'S THE SAME PEOPLE WHO RUN BOTH THE

PROCESS AND THE LINE ORGANIZATION AND IF A CONFLICT ARISES IT'S OUR AGREEMENT THAT THE PROCESS ALWAYS WINS AND NOT THE LINE ORGANIZATION."

"AND THEN WE TALK ABOUT ACTUALLY TURNING THE MAP FROM BEING THIS LINE ORGANIZATION TO PROCESS ORGANIZATION. BUT WHAT I SEE, THERE ARE DIFFICULTIES WITH LIABILITY, LEADERSHIP AND CONTROLLING. SOMETIMES YOU STILL HAVE TO CONTROL IN THE LINE AND I THINK WE'LL NEVER GET AWAY FROM THAT, BUT INSTEAD IT'S STARTING TO WORK IN A MATRIX ORGANIZATION, BECAUSE THERE YOU HAVE THE PATIENT STREAM BUT ALSO MAYBE A LINE ORGANIZATION THAT'S SUPPOSED TO GIVE THE SUPPORT NEEDED."

"YES, THE TARGET IS TO BECOME MORE AND MORE PROCESS ORIENTED. BUT THE WAY I UNDERSTAND IT FROM THE DIRECTORS, THE TARGET IS NOT TO BECOME COMPLETELY PROCESS ORIENTED."

As was hinted at in the previous quotes, Skaraborg hospital is not completely organized in processes and the one area where there is the greatest deficit is budgeting and controlling. The budgets are still completely given out according to the line organization and results are demanded from line owners as well.

"I HEAR WHAT YOU'RE SAYING AND IT'S NOT IDEAL, BUT WE HAVE TALKED ABOUT IT QUITE A BIT AND WE DON'T FEEL THAT OUR ORGANIZATION IS MATURE ENOUGH TO LIE THE FUNDING ON THE PROCESSES. IT'S OUR GOAL TO DEVELOP TOWARD THIS."

"BECAUSE HERE WE CAN SEE THAT I GET INTO THIS WITH PLANNING AND BUDGETING, FOLLOW-UP AND SUCH AND TO DEVELOP THE TRADITIONAL ACCOUNTING IN THE LINE ORGANIZATION TOWARDS A COMPLETE PROCESS ORIENTATION - WELL, I DON'T THINK OUR MANAGERS ARE READY FOR THAT."

"AND THEN IT'S LIKE THIS WITH THE LINE - WELL, THE HOSPITAL AND THE HEALTHCARE SYSTEM HERE AND IN OTHER PLACES ARE LINE-FOCUSED AND VERY PROMINENT, SO IT'S THE LINE THAT RESULTS ARE EXPECTED FROM. YOU DON'T EXPECT RESULTS FROM PROCESS LEADERS, THE PATIENT'S WAY THROUGH THE HOSPITAL, BUT IT'S THE LINE MANAGER, MAYBE A UNIT THAT ALL OF A SUDDEN IS SUPPOSED TO BE RESPONSIBLE FOR THAT."

6.2.5 IT support

Of course there is an IT system at Skaraborg at the moment; however several interviewees were dissatisfied with its current possibilities as the following quotes show. Especially the missing adaption to a process organization is cause for unhappiness amongst the employees.

“NO, THE IT SYSTEM DOESN’T FACILITATE THE WORK AT ALL.”

“WE HAVE TALKED A BIT ABOUT THE IT QUESTION, THAT THE IT SUPPORT IN HEALTHCARE IS RUDIMENTARY COMPARED TO THE INDUSTRY.”

“YES, THAT COULD DISRUPT THE PROCESS. BUT WE’RE USED TO IT, BECAUSE IT’S ALWAYS BEEN LIKE THAT, SO YOU DON’T EVEN THINK ABOUT IT. NO. IF YOU FOR EXAMPLE LIVED IN GOTHENBURG, WE DON’T SEE YOUR JOURNAL AS IT IS TODAY. AND IF YOU GO TO THE CARE CENTER, WE DON’T SEE THOSE WHO ARE THERE EITHER; BY HAVING DIFFERENT AUTHORITIES, WE HAVE DIFFERENT JOURNALS. IT’S VERY FRUSTRATING BUT I SEE IT AS OBVIOUS, BECAUSE IT’S ALWAYS BEEN THIS WAY. TODAY IT’S ACTUALLY ALREADY MUCH BETTER THAN IT HAS EVER BEEN. WE AT LEAST HAVE A COMMON JOURNAL FOR SKARABORG.”

“NO, [OUR CURRENT IT SYSTEM IS IN NO WAY ADAPTED TO SUPPORT IDEAS ABOUT PROCESSES]. AND I GET SNUBBED EVERY TIME I BRING IT UP ON REGIONAL LEVEL: COULD WE MAYBE ADAPT TO PROCESS ORIENTATION. NO, THEY HAVEN’T GOTTEN THAT FAR.”

“THAT SHOULD WORK IN [OUR CURRENT IT SYSTEM] BUT WHAT YOU DON’T HAVE IS LIKE FINDING THINGS EASILY AND YOU HAVE NO DECISION SUPPORT.”

“YES, THAT’S WHERE WE’RE STARTING - WE ACTUALLY HAVE A LOT OF THINGS THAT WE MEASURE. BUT WE STILL DON’T REALLY HAVE THE TOOLS WE NEED, LIKE I SAY IT SUPPORT, WHERE WE CAN FOLLOW THE PROCESS IN DETAIL.”

As was already hinted at in one of the previous quotes, the problem with the IT support lies not so much with Skaraborg itself but rather within the region. One interviewee had the following interesting insight, which shows that Skaraborg is simply not allowed to look for a better IT system at the moment.

“YEAH WELL, I THINK IT’S HARD FOR US BECAUSE WE HAVE THIS STANDARDIZATION PROCESS THROUGHOUT THE REGION IN THE WAY THAT WE ARE SUPPOSED TO CONSOLIDATE OUR SYSTEMS AND WITH THAT, THE ONE AHEAD NEEDS TO WAIT FOR THE REST, SO I SOMETIMES FEEL VERY FRUSTRATED AND WE WOULD NEED TO HAVE A MUCH BETTER SUPPORT SYSTEM AND I UNDERSTAND OF COURSE THAT ECONOMIC CONSIDERATIONS MEAN THAT WE NEED TO WAIT UNTIL WE FIND SOMETHING THAT IS APPROPRIATE EVERYWHERE [...].

6.2.6 Leadership

There is one person that was named over and over again by the interviewees when asked, how the focus on processes started. He can be seen as the visionary, who brought the whole idea into the organization and he is the one, who keeps it alive and pushes it further all the time.

INTERVIEWER: "WHO IS RESPONSIBLE FOR BRINGING PROCESS MANAGEMENT INTO THE ORGANIZATION?" RESPONDENT: "THAT'S AN EASY QUESTION. THAT'S OF COURSE SL, WHO HAS PUSHED IT."

In addition to this one visionary, the hospital management is also very much on board and supports the development and gives directives. As one interviewee put it:

"THE HOSPITAL MANAGEMENT IS VERY CLEAR ABOUT WHAT WE ARE SUPPOSED TO ACHIEVE."

This engagement can also be found on lower levels, showing that pretty much all kinds of leaders are involved and care about process management. One interviewee reported:

"SO THIS [INSTRUCTION TO MAP A SPECIFIC PROCESS] DIDN'T COME FROM TOP MANAGEMENT, BUT IT CAME FROM A LITTLE FURTHER DOWN. AND THEN IT'S THE HEAD OF A UNIT, WHO DECIDES THAT PERSONNEL SHOULD BE GOING TO PROCESS TRAINING, IN ORDER TO - I DON'T KNOW, IF YOU'VE READ THE SKARABORG GUIDE OR IF THEY - BUT OF COURSE YOU HEAR THAT PROCESS TRAINING IS IMPORTANT AND THAT YOU SHOULD GO THERE AND TAKE INFORMATION THERE FROM YOUR OWN UNIT.

In Skaraborg, different roles have been instated with the introduction of process management, such as process leaders, process owners, a steering committee and a directorate. This means that the responsibility for actual action lies with different people and everyone has a specific function, which is clearly defined.

6.2.7 Staff

Although focus on processes is big, most processes are still within one function. As one interviewee stated:

INTERVIEWER: "MOST OF THE PROCESSES IN THIS SYSTEM, ARE THEY - CAN YOU SAY THAT THEY ARE WITHIN ONE FUNCTION OF THE HOSPITAL AND STAY THERE, OR DO THEY CROSS FUNCTIONAL BOUNDARIES IN MANY CASES? OR ARE THEY EVEN SOMETIMES ACROSS

ORGANIZATIONAL BOUNDARIES?" RESPONDENT: "WE HAVE ALL THREE TYPES. AND THE MOST COMMON IS NATURALLY THE ONE WITHIN ONE FUNCTION."

However, even if many of the processes don't cross functional boundaries, they do cross professional boundaries and are executed by an interdisciplinary team. One interviewee mentioned that this way of work was still new, but that there are definitely benefits to be gained from it.

"IT'S VERY DIFFERENT. IN DERMA, WHICH IS IN THE AREA OF MEDICINE, THEY DO PROCESS ORIENTED WORK WITH TUMOR PATIENTS AND THEY DO IT TOGETHER WITH SURGEONS AS WELL, SO THAT GOES ACROSS BOUNDARIES, THEY LOOK AT THE PATIENT'S FLOW THERE. AND THEY STARTED THE PROCESS WORK BY ATTENDING A BASIC SKILLS WORKSHOP TOGETHER, DOCTORS AND NURSES, BOTH FROM SURGERY AND MEDICINE. AND THEY EXPERIENCED IT AS VERY POSITIVE, BECAUSE THEY FELT LIKE: GOD, HOW WELL THIS HERE WENT."

"IN MY AREA, WE DON'T HAVE THAT MANY PROCESSES, WHERE WE WORK ACROSS BOUNDARIES. WHERE I KNOW THEY WORK ACROSS BOUNDARIES THOUGH, I THINK IT'S THE OTHER WAY AROUND, THAT YOU GAIN A GREATER UNDERSTANDING FOR ONE ANOTHER. WE'RE NOT SO USED TO WORKING ACROSS BOUNDARIES."

One hurdle for interdisciplinary work is the fact that budgets are still distributed based on functions, which leads to questions about who should be financially responsible for a specific process. As was mentioned in the section on organizational structure, the budget is still given out based on a line organization, which complicates interdisciplinarity.

Just as in most other hospitals, Skaraborg hospital has a distinct hierarchy and there are large differences between the professions. As one nurse stated about doctors:

"MY IMPRESSION IS THAT THEY ARE MORE INDIVIDUALISTIC AND THEY KNOW THAT THEY CAN REST ON WHAT THEY HAVE READ AND WHAT THEY CAN AND ALL THAT."

"THE DOCTORS ARE VERY FOCUSED ON PATIENTS. BUT I DON'T KNOW, IF THEY THINK THAT THE CARE PART IS AS IMPORTANT AS THE MEDICAL PART."

On the other hand, people also recognize reasons for the differences. One nurse for example mentioned when asked, if all nurses were positive towards the introduction of process management:

“NO, NOT AT ALL. THERE ARE OF COURSE THOSE, WHO ARE AGAINST THE UNKNOWN AS WELL. I THINK IT’S EASIER TO OPEN UP TIME FOR A NURSE WITH THE WORK SCHEDULE AND ALL THAT. I MEAN, DOCTORS DON’T HAVE A SCHEDULE AND WE [NURSES] CHANGE WITH ONE ANOTHER, IF I DON’T WORK HERE, I CAN WORK THERE. SO THERE IS A COMPLETELY DIFFERENT FLEXIBILITY IN OPENING UP TIME AMONG THE ASSISTANT NURSES AND THE NURSES THAN THERE IS AMONG THE DOCTORS. SO I THINK THAT’S THE MAIN REASON WHY IT’S EASIER TO INVOLVE NURSES AND ASSISTANT NURSES.”

So at Skaraborg, there seem to be differences between the professions but they seem to arise more from different ways of working than from huge differences in attitude. At least within the professions, there is a culture of open communication, in which mistakes are broached openly and solutions to prevent their occurrence are sought, as this statement by a nurse shows:

“THE SYSTEM TO HANDLE DEVIATIONS IS ALSO VERY IMPORTANT FOR THAT, THAT YOU MENTION THOSE MISTAKES AND DEFECTS THAT WE FIND IN OUR PROCESSES, THAT WE REALLY, THAT THE PERSONNEL DARES TO TALK ABOUT OR REGISTER THOSE AND THAT WE HAVE FOUND THEM OR EVEN THAT I HAVE DONE SOMETHING STUPID. AND THEY STILL DARE TO WANT TO COMMUNICATE THAT, SO WE CAN IMPROVE OUR PROCESSES.”

If the communication between the professions is this open as well, could not be determined from the material; however the openness within and the general acceptance between the professions leave to assume that this may be the case or will at least develop this way in the near future.

Best practice is being identified, either from within the organization or from the outside and the information is shared with the others as the following two statements show.

“I CAN TAKE AN EXAMPLE FROM A DIFFERENT UNIT THAT I EXPERIENCED AS A PATIENT MYSELF.”

“AND I TOOK THE POSITION OF LAYING LOW A BIT, NOT BEING SEEN AS COMPLAINING BUT INSTEAD GIVING TIPS AND SHOWING GOOD EXAMPLES[, SUCH AS] OTHER COMMUNES, HOW THEY WORK TOGETHER, HOW THEY DEVELOP.”

A similar effect is achieved with more experienced employees taking the position of role models for the younger colleagues and teaching them how to work in the right way by for example giving trainings.

6.2.8 Communication

Taking the three areas that were deemed important in the framework, presence, education and evaluation, all three are present at Skaraborg.

Continued presence of the attempt is ensured, by visualizing for example the patient flow.

“BUT WE HAVE VISUALIZED IN A WAY THAT WE KNOW THE PATIENT’S WAY. I THINK WE’VE REALLY DONE THAT.”

In general, those visualization devices are well available to the staff; however one interviewee reported a story, where they wanted to check some information, which had been taken down quickly after its publication without notice:

“YEAH WELL, IT WAS ONLY A FEW WEEKS AGO THAT I SAW A PROCESS MAP THAT WAS HANGING ON THE WALL AND I WANTED TO GO BACK AND READ IT BUT IT HAD BEEN TAKEN DOWN.”

It is also important that process management as such is present in the regular reports on the hospital and staff is therefore repeatedly confronted with it. As was mentioned before every interviewee knew about processes and process mapping and had at least a general idea of how and why it was done.

As far as education goes, employees at Skaraborg have received training in process mapping as several interviewees stated. Examples of their statements can be found below and emphasize how much care is taken at Skaraborg to educate the employees. There are different levels of education that can be reached, the basic levels are mandatory for everyone, while the higher levels are mandatory only for specific positions but may of course be completed by other employees as well. Many times, the training is provided internally by employees who have completed the level at an earlier time.

“AND WE STARTED BY GOING TO A PROCESS TRAINING, ONE OF THOSE INTRODUCTORY COURSES, FOR A FEW DAYS.”

“SO WE GOT TRAINING IN HOW TO DRAW PROCESS MAPS YOU CAN SAY AND WITH THAT WE ALSO DEFINED THE DIFFERENT STEPS IN THE CARE PROCESS.”

“SKARABORG GIVES PROCESS TRAININGS TWICE A YEAR AND THEN WE PICK THOSE EMPLOYEES THAT WE THINK ARE USEFUL. OF COURSE IT NEEDS TO BE A MIX OF ALL OCCUPATIONS.”

“AND SOME YEARS AGO THEY STARTED AT SKARABORG TO HAVE THESE PROCESS TRAININGS FOR TWO DAYS [...]. AND THE IDEA WAS THAT EVERYONE WHO WORKS THERE SHOULD HAVE ATTENDED A PROCESS TRAINING.”

“[...] I THINK THEY ARE VERY DRIVEN AND THEY REALLY WANT TO AND WE HAVE SEVERAL EMPLOYEES WITH BLACK BELT TRAINING WITHIN [...].

“AND THEN BECAUSE I AM HEAD OF DEPARTMENT FOR COMPANY DEVELOPMENT AND WITH THE EXPERIENCE I HAVE, FOR EXAMPLE WITH THE SCORECARD AND PROCESSES AS SUCH, I GIVE MANY TRAININGS AND TEACH THEM AND MAKE SURE THEY UNDERSTAND WHAT THEY SHOULD DO.”

“WE HAVE DONE PROCESS TRAINING FOR A LONG TIME AT SKARABORG HOSPITAL. IT WAS ALREADY IN PLACE IN THE BEGINNING OF THE 2000S, AT LEAST 8-9 YEARS BACK IN TIME.”

“WE HAVE THE BASIC TRAINING IN PROCESS WORK AND WE HAVE A HIGHER COURSE TO CONTINUE EDUCATION.”

The last important issue, evaluation, can also be found at Skaraborg. Specific measurements are decided on and put in the balanced scorecard. Those results are then followed up on and in the case of deviation, measures are taken to solve the problem. The following quotes give an impression of the importance of evaluation of results at Skaraborg hospital.

“BUT IT’S ALSO IMPORTANT TO GET RESULTS. WE FOLLOW DEVIATIONS QUITE A BIT FOR EXAMPLE, WE’VE DONE THAT FOR A WHILE NOW. [...] THEN YOU CAN SHOW SOME STATISTICS ABOUT IT AND TALK THEM OVER AND FEEL GOOD ABOUT YOURSELF. YES NOW WE HAVE LIKE — YES NOW WE’VE GOTTEN BETTER AT THIS. I GUESS IT’S THIS FEEDBACK THAT YOU NEED TO SEE THAT WHAT WE DO IS VALUABLE.”

“HERE WE ALSO HAVE TARGET-ORIENTED RESULT MEASUREMENTS FROM THE REGION AND FROM THE HOSPITAL AS WELL.”

“YES, THE PROCESSES AND THE SCORECARD, WHICH IS A DOCUMENTATION SUPPORT FOR THE PROCESSES, ARE THE DEVIATION SYSTEM. AND THEN WE HAVE OUR QUALITY REGISTER AND OUR INDICATORS AS WELL, BUT THE PROCESSES ARE OF COURSE THE BASE FOR ALL OF THAT.”

“SO WE HAVE REALLY BEEN PUSHED FROM DIFFERENT SIDES TO DEVELOP OUR FOLLOW-UP. SO IT HAS GOTTEN A LOT BETTER, I MUST SAY, NOW THAT WE FOLLOW THE RESULT COMPARED TO THE PLAN IN A FEW VERY EASY GRAPHS.”

“ALL DEVIATIONS ARE OF COURSE TAKEN UP AT [OUR MEETINGS] AS WELL.”

“BUT IT’S IMPORTANT TO GET RESULTS AS WELL. WE FOLLOW MANY DEVIATIONS FOR EXAMPLE, WE’VE DONE THAT FOR A LONG TIME NOW.”

“NO, WE WORK A LOT WITH DEVIATIONS. AND TO LIKE SEE, WE UTILIZE CONTROL AND DEVIATION SYSTEMS MORE TO TAKE CARE OF ALL PROBLEMS IN DIFFERENT WAYS AND APPLY THEM AS IMPROVEMENT INSTRUMENTS.”

6.2.9 Summary

Applying the previously developed framework to Skaraborg hospital shows that all the issues that come up in the framework have been touched upon by Skaraborg in one way or another. Each of the eight important factors is well known throughout the organization although naturally not necessarily under the terminology that has been used in the framework. Additionally, the weight of customer focus as the main goal is very present in the organization and its presence is continuously reinforces as well.

The one factor that is somewhat lacking in Skaraborg is the codified implementation plan for process management. However, the different elements that are important in this context are certainly in place, making the lack of a high-level plan less significant.

All in all, Skaraborg is taking care of all factors that have been found important throughout the development of the framework. They are therefore well-equipped on their way towards process management in healthcare.

7 Discussion

This chapter refers back to the research questions that were posed in the beginning and tries to answer them with the information that has been gathered through the case studies.

7.1 Implementing process management in a lasting way in a healthcare organization

Developing the framework during the first part of this thesis it has become apparent that implementing process management in healthcare organizations is a very complex task and faces specific issues. These can roughly be sorted into two different categories. For one, healthcare organizations are service organizations dealing with people. Some illnesses have not even been fully understood and the same disease can take multiple courses in different patients. Also, the illness has progressed to different states when patients are entering their recovery process. Therefore, there is a lot more variability inherent in the process than with manufacturing organizations.

The second main issue is the difference between professions in healthcare. Hospitals have traditionally been organized functionally with a lot of power lying with the doctors and giving them much freedom in deciding how to treat their patients. Nurses on the other hand are traditionally low in the hierarchy and have to work within the constraints given by the doctors. Aside from the vertical differentiation, there is also a strong horizontal differentiation in healthcare, meaning that doctors from different functions don't usually work together and that there are large differences between the importances of the various functions. Trying to focus on processes therefore goes against the grain for healthcare organizations. Not only are the functions expected to work together but doctors and nurses are seen as providing an equally important contribution to the patient's recovery process.

Having only two problem areas seemingly makes it easy to implement process management in healthcare organizations. However, these two areas break down into several individual challenges, which in themselves are all difficult to handle. This is also why there is no one perfect, overarching suggestion for the implementation of process management in healthcare organizations yet, despite the continued attention of researchers to this topic. On the other hand, manufacturing organizations for example don't have one universal approach either. It always works best, when the implications of certain cornerstones are adapted to the conditions within the organization. Therefore, individual solutions must be sought,

keeping certain important points in mind. These points are given by the framework that was developed in the course of this thesis and will be discussed below.

The first potential problem is related to the fact that healthcare organizations deal with people rather than products and therefore have a higher variability. This means that some processes won't be possible to standardize at all and others only to a certain degree, resulting in a distinction between standard processes, routine processes and non-routine processes. Process management in the narrower sense only applies to standard and routine processes. Here, guidelines can be given on how to execute the task. The guidelines will go into more or less detail, depending on the kind of process in question. Consequently, the first step to solving the variability problem is to scrutinize the processes and determine how standard they are. Only then can guidelines be given for the execution provided that the process lends itself to this. Non-routine processes are not possible to standardize as a whole as they demand individual attention every time and are not likely to appear again.

However, several support processes may lend themselves to a guideline, such as getting results from the pharmacy. This would reduce the amount of variability in the overall process. Also, certain characteristics from process management can be kept to simplify the non-routine processes. Taking the supporting IT system for example, it would make non-routine processes much easier, if patient information was recorded in a single file that was available to everyone. That way, all information would be visible right away and the patient would not be bothered with redundant questions over and over again. Also the general tendency to work in interdisciplinary teams and communicate across professional and hierarchical borders would come in handy, when tackling non-routine cases. Problems would be discussed more openly and in different forums, making a solution of the case more likely. Therefore, the patient might have a quicker recovery than would otherwise be the case.

Overall, it appears that variability in healthcare is not a problem for the implementation of process management. On the contrary, implementing process management seems to be the solution to the problem of variability in the sense that it helps with its reduction and increases the value even for patients with non-routine afflictions. This leads to the second potential problem of high vertical and horizontal differentiation in healthcare organizations.

Implementing process management is always a change process from a previous state. This means that not only hard facts such as the design of the aspired process are important but also soft facts such as the question of how to convince the people in the organization to

change. This is complicated by the traditional culture in hospitals, which is one of mistrust between different specialties and hierarchical levels as well as between medical and administrative staff. Therefore, the solution lies in changing the culture to incorporate certain characteristics. This mainly includes the three central aspects of the framework: leadership, staff and communication between them. From the case studies that were examined, several best practices in those areas could be established. However, it needs to be understood that not all approaches are equally applicable to each organization. They rather give examples of how it has worked before, thereby providing suggestions of what might work again.

As a key point of process management is the focus on joint working, this principle needs to be upheld during all phases of the initiative. From the beginning, representatives from all levels need to be included in the development of the processes. Ideally, the result is a process that everyone agrees with, minimizing the amount of resistance that will be put up against its implementation. It is also important that the implementation process is approached slowly and only after careful planning. By taking one step (or rather patient pathway) at a time, everyone in the organization has the possibility to get used to the change and encountered problems can be solved for the design and implementation of the next pathway. It also gives the staff the possibility to see the results of implementing the process and making them eager for more. This of course only applies, if the results are communicated adequately throughout the organization.

It is also very helpful to convince a leading physician or otherwise respected person of the change. If such a respected peer is enthusiastic about process management, it is more likely that people from his profession and/or hierarchical level will follow suit and not be opposed to the change. At the same time, the management needs to back up the change wholeheartedly and give out consistent messages of support.

Another crucial aspect is open communication in all directions. The staff needs to get information but they also need to have the possibility to ask questions or voice concerns about the change. For this, a dedicated group precisely for this purpose would be helpful. As many authors discovered, using external support for this job may make the whole thing easier. External people have a certain distance to the organization and can therefore give answers and advice from outside the organizational structure. Also, they most likely have training in executing such a change and might be able to mediate certain situations.

Taking all these things into account, it becomes obvious that the solution to opposition to process management in healthcare is a thoroughly planned change process. This of course makes sense when remembering that the main hurdle was the traditional culture in hospitals. Culture is exactly the point that change management is concerned with. Therefore, if a healthcare organization decides to implement process management, they need to deal with the change implementation, which might include employing external help for the time of the transition.

7.2 Applicability of the results to Skaraborg hospital

The analysis showed that Skaraborg hospital is well on its way of implementing process management firmly within the institution. As the implementation process takes a long time, they have not yet reached the end; however they have all the prerequisites for a successful completion. They have taken all the aspects of the framework into consideration to some extent at least, giving them a good prognosis for the continued application of process management in their hospital.

Although Skaraborg hospital did not follow a pre-defined list of steps for their implementation process, they included all important points in their planning. Having a high-quality implementation process therefore increases their chances of success, especially in a healthcare organization (Bieber, 2010). They started out by setting long-term goals and breaking those down into short-term milestones and yearly targets for them to achieve.

Their careful integration of different stakeholders also shows that they considered and anticipated the social processes that take place during a change process as pointed out by Procter & Brown (1997) and Grove et al. (2010). Also they continuously include and inform everyone in the change process, ensuring support rather than resistance.

With regard to external support, an approach that was advertised by several authors in the case studies, Skaraborg has developed tight relationships with different universities. This approach provides the necessary understanding of the problem for a change process as mentioned by Grove et al. (2010). Using a university rather than a consulting agency can have advantages as well as disadvantages. A university for example will probably have less experience than a consulting agency and therefore work more with trial and error. On the other hand, a university is continuously trying to stay on top of new developments in the area, providing up to date information to the hospital. Also, because of the number of students and faculty, the workload that can be covered in a specific time period is

presumably higher than with a consulting agency. In addition, the university probably doesn't have to get paid because it can use the results of the studies for own research and teaching activities. Lastly, a university can provide the opportunity for further education for hospital employees as is the case with Skaraborg. All in all, using a university as an external partner in general can hold numerous benefits and in the specific case of Skaraborg it has been working very well for a long time now.

Customer focus, as the central idea of process focus, is high at Skaraborg. They use the customers' expectations as a starting point from which to design their processes as was for example suggested by Walters & Jones (2001). As called for by Grove et al. (2010), Skaraborg has a clear understanding of who their customers are what they want, enabling them to deliver just that. In everything that is done at Skaraborg, the patient is taken into consideration, making service an underlying feature of the hospital as suggested by Walters & Jones (2001). Also, in concordance with Grove et al. (2010), patient satisfaction is used among others as a means to evaluate the quality of the hospital.

With regard to the organizational structure at Skaraborg there is a clear focus on processes. The underlying organization is still a line organization but with high process influence. This mix of line and process organization was advocated by several authors (Wihlman, Lundborg, Holmström, & Axelsson, 2010) (Vera & Kuntz, 2007) (Palmberg, 2010), who chose it in favor of a complete conversion to a process organization, just as the employees at Skaraborg.

Although a clear definition for processes (or as Vera & Kuntz (2007) call them: pathways) from the top seems to be missing, most employees have a good understanding of what they are all about, presumably because they have been taught by example by other employees. As was also found in literature (Weßel, 1998) (Bick, Rycroft-Malone, & Fontenla, 2009), employees see the processes and standards as a way of improving safety for patients.

Walters & Jones (2001) pointed out the importance of regarding processes as inter-organizational in order to make process management stick. This attitude can absolutely be found in Skaraborg hospital, even though the extent of interdisciplinarity varies between the different departments.

One thing that was pointed out in literature (Tucker, Larkin, & Martin, 2004) is the fact that financing and controlling should be organized by processes as well in order for process management to work efficiently. This is not yet the case in Skaraborg, as line managers

receive budgets and are responsible for results. However, the employees are aware of this deficit and are planning to see to it as soon as possible.

The IT system at Skaraborg was deemed inappropriate for process management by the interviewees. Many things such as user-friendliness and standardization were found wanting. However, in this case, Skaraborg has to wait for other hospitals in the area to reach the point they are already at. Therefore, they are not free to design an appropriate IT system at the time. If this ever becomes the case, they can use the insights from previous case studies, such as getting external support (something their current partner universities could most certainly provide), having one solution for the whole organization, using processes as basis for the IT system and making it easy to use and reliable.

Skaraborg hospital has one person, who promotes process management and is a visionary, seeing a desired state somewhere in the future, which has been identified as essential by Walters & Jones (2001). However, this person is not alone but also has the different management levels on board, which is very important according to Grove et al. (2010). Everyone shares the responsibility and collectively agrees on short- and long-term goals. This brings to mind the concept of distributed leadership, defined by Chreim et al. (2010), which has been found very effective for the implementation of process management.

As several authors noted (Tucker, Larkin, & Martin, 2004) (McNulty & Ferlie, 2004) (Palmberg, 2010), it is important that the initiative is owned by the staff, meaning that everyone is involved regardless their organizational level. This is exactly the case at Skaraborg, where all professions and levels are informed and have the possibility to speak up about problems or deviations. Contrary to most experiences in the case studies, Skaraborg seems to have a comparably small difference between professions. Of course doctors work differently than nurses there as well; however the various professions seem to have a great understanding for one another's problems and circumstances. Generally the interviewees agreed that there was a very open and trusting relationship between everyone, which according to Chreim et al. (2010) is necessary for successful implementation of process management. Working in interdisciplinary groups generally works well at Skaraborg, which was one of the most frequently named success factors in literature (Bieber, 2010) (Walters & Jones, 2001) (Tucker, Larkin, & Martin, 2004) (Weßel, 1998) (Beckman Pace, Sakulkoo, Hoffart, & Kuckelman Cobb, 2002) (Bick, Rycroft-Malone, & Fontenla, 2009).

Lastly, the communication at Skaraborg is well developed. It includes all three relevant areas, which are the continuous presence of the initiative, the education about the initiative and the evaluation of the results. As supported by Tucker et al. (2004), process management is continuously communicated from top management to the employees, giving the latter the impression that management cares about the initiative. Posting process maps in the wards has been found to be very helpful, which is in accordance with Dickson et al. (2009). Also the sharing of best practice, which was suggested by Tucker et al. (2004) and Grove et al. (2010) has been employed at Skaraborg with great success.

In addition to communicating the initiative, employees are also educated about it, which enjoys general approval in literature (Beckman Pace, Sakulkoo, Hoffart, & Kuckelman Cobb, 2002) (Goddard, Alty, & Gillies, 2001) (Procter & Brown, 1997). Several workshops are continuously being offered to Skaraborg employees, which according to Bieber (2010) and Dickson et al. (2009) are specifically effective in educating employees. In some cases it seemed as though employees took part in a workshop but had no way of using the new knowledge afterwards, because it was not yet needed. It may therefore be better to follow the suggestion of Boerstler et al. (1996) and educate people only right before they need it.

In terms of evaluation of results, Skaraborg is very dedicated to taking measurements and comparing them to previously set targets. This gives the opportunity to adapt processes as soon as a problem appears, which is also advocated in literature (Bieber, 2010). Therefore Skaraborg complies with the general opinion in literature that evaluation of processes is crucial and leads to processes that continuously deliver high quality results (Bieber, 2010) (Bick, Rycroft-Malone, & Fontenla, 2009) (Beckman Pace, Sakulkoo, Hoffart, & Kuckelman Cobb, 2002) (Weßel, 1998).

All in all, Skaraborg is doing a very good job at implementing process management in their hospital. They have planned the implementation carefully and are taking small steps, always designed to reach one overarching goal. It is no surprise that they are one of the leading hospitals when it comes to process management. Their case is one that other hospitals can use as a benchmark for their own transformation.

7.3 General managerial implications

Using the previous results it can be said that the most important aspect when deciding to implement process management is the proper management of the transition phase. Although the infrastructure needs to be supportive of process management and needs to be

adapted with this in mind, involving the people and guiding them towards the new state is the biggest challenge. This is the aspect in which successful and unsuccessful initiatives differ the most.

In practice this means for managers that they need to be aware of this and carefully plan the implementation phase beforehand. They also need to delegate tasks and power to lower hierarchy levels along with a clear understanding of what is expected as a result. Since this is so complicated and has many psychological aspects, it would be prudent to involve external support, at least to plan the implementation. They not only have special training in these issues but they also provide an unbiased viewpoint.

Having made sure that the implementation process is well planned, including several feedback loops to check the progress, the right infrastructure also needs to be brought into place. Adding value to the customers presents the ultimate goal for each process, which is to be arrived at by using interdisciplinary teams. Also, adequate IT and accounting systems should be in place, supporting the focus in processes through their design. Of course depending on the situation of the company, some points are more important than others but if all aspects are at least considered before going through with the initiative, the chances that process management will diffuse deeply into the organization are disproportionately high.

7.4 Future research recommendations

Since this thesis has almost exclusively dealt with literature, the next step would be to test the framework in real life. This would shed light on how relevant each of the factors is. Of course considering the length of an implementation process, this task could only be achieved in a long-term study. If this study could be designed in a quantitative way, this would increase the relevance of the framework, because this study has only dealt with it in a qualitative way.

Another very interesting area for further research would be the supporting IT system. As those systems should be highly individualized to an organization, this kind of research would probably have to be in the form of a case study; however, if several case studies dealing with the design process for different organizations could be identified, a comparative analysis could be made much like in this study.

Next the hierarchical structure of hospitals should be examined even more thoroughly. Do the proposed methods for driving change and minimizing resistance work as well in this context as they do in other organizations? This was assumed throughout this thesis; however it may well be possible that the unique position of doctors warrants a different approach.

Lastly, research could be conducted regarding the clash between functional and process-based organizations. It was suggested throughout this thesis that a combination of the two is the most appropriate choice; however it needs to be determined, how much functional organization is needed in order to be able to make full use of the functional knowledge of doctors.

In addition to these general issues, one research area strictly related to Skaraborg hospital would be the current design of its IT system and possible ways to improve it. From the available data no information could be gained about this topic, but the analysis has shown, that this is a very important issue as well for the successful and lasting implementation of process management in healthcare.

8 Conclusion

In this thesis, a literature review was performed in order to gain insight into the implementation of process management in healthcare organizations. The results of this study were then compared to the situation at Skaraborg hospital.

Using literature, a framework was developed as a first step, which includes all the factors that need to be in place in order to successfully apply process management, continuously keeping customer focus in mind as the highest good. It was discovered that implementing process management is a long and tricky undertaking. It needs to be thoroughly planned, preferably with external support, and its progress needs to be monitored closely in order to communicate short-term results or adjust the process, if need be. In order to sustain process management once it has been implemented, the right infrastructure and the right culture need to be formed during the implementation. This means that organizational structure, IT support, leadership, staff and the communication between them need to be in place and have to be continuously monitored. All the while, the customer and his value have to be the focus of any activity.

The infrastructure consists of the actual process management on the one side and a supporting IT system on the other side. For the culture, staff, leadership and the communication throughout the organization have to be formed to become an open and honest environment, in which everyone is involved in a constant improvement of the processes.

As a second step, the framework was used to assess process management at Skaraborg hospital. Interviews with Skaraborg hospital employees were used to determine which important factors are already sufficiently addressed at Skaraborg and which factors still have development possibilities. Generally, Skaraborg hospital is doing well with the implementation process. They have planned the implementation carefully and are taking small steps, always designed to reach one overarching goal. One development possibility is the fact that financing and controlling are not organized by processes yet. However, this deficit is known in Skaraborg hospital and a change is planned in the near future. Secondly, the IT system is not supportive of processes. Skaraborg hospital only has limited influence on this, because they have to wait for other hospitals in the area to reach their level of maturity with regards to process management.

All in all it is no surprise that Skaraborg hospital is one of the leading hospitals when it comes to process management. Their case is one that other hospitals can use as a benchmark for their own transformation.

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