Evaluate the impact of the relationship between project manager and project sponsor on project performance

with emphasis on the final project result and the end effect

Jason Makins
Master Thesis Final Report

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Abstract

A critical factor in project success or failure, is the impact on project outcomes, caused by the relationship between the project manager and project sponsor.

Theory researched provides the foundations between the relationship between project manager and sponsor for an analysis on project best practices. The objective of which is to apply these theories to help create a set of guidelines or recommendations to be implemented to help measure and then manage the relationship through project processes or guidelines.

The analysis covers the established views on the roles of both manager and sponsor within a project as well as the relational issues that are a part of it. The impact of these issues on project outcomes are the foundation of this dissertation. A portion of the analysis will be using lessons learned from previous projects and part of this research is to find best practices for identification and application of these lessons.

Empirical data is in the form of a series of interviews with both the main company and a benchmarking process using three other companies. This will help identify the actual perceptions and complexities of the roles and the relationship between managers and sponsors.

In order to better understand the difficulties and challenges that exist in the relationship both parties can work to avoid or overcome them as they arise. The difficulties will be both “hard” in terms of technical knowledge as well as “soft” relating to people skills. Knowing how the relationship functions best would be an important asset for each party and will greatly increase the chances of project success.

Keywords: project sponsor, project manager, relationship management, lessons learned
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Part I. Introduction

Successful project management includes actively managing interactions to meet sponsor, customer and other stakeholder requirements [11]. High quality interaction between project managers and project sponsors are generally no coincidence and the same interaction between those people and the others they deal with usually exists. The interaction between these two key people within a project can be the main attributable factor to success or failure. Great sponsors ensure the project has the right resources to get the work done and great project managers articulate clear resource requests and "right size" the ask to the need [21]. Effective sponsors are an advocate, coach and battering ram for the project and effective project managers know how to leverage a sponsor and listen to the sponsor’s counsel [21]. Knowing how to interact and manage the opposite person is a key skill in understanding how to achieve the best results for the project or business case for the project manager and project sponsor respectively.

A strong sense of ownership shows through when sponsors hold the project manager and team accountable for results. This works best when project managers embrace the accountability and enforce it within the team [21]. A project manager is ultimately responsible for project objectives and it is important that a sponsor knows he or she shares similar accountability for the project business case on a higher organisational level.

The literature studied covers a lot of what type of person is required in each role as well as possible responsibilities held by each position. There is also literature on issues that make up a good relationship but many are difficult to measure and the perspectives by the manager and sponsor individually are not as well covered. This is important as the quality and accuracy of these perspectives have a large impact on the nature of the relationship. Furthermore, measuring the success of a project is different depending on in which role the person sits. The main objective should be to know what the opposite person expects from you and what they consider as project success, this information is powerful in maintaining a successful relationship.

There are different interpretations of the relationship between managers and sponsors and these likely vary from company to company and even within individual companies. These vary due to nature of work, training and previous experience, however the critical point is that the interpretation is the same between each manager and sponsor working together.

1 Objective

The main objective of this dissertation was to determine the effect of the project manager-sponsor relationship on the final outcome of a project. Following this, the lessons learned process was analysed both as a source of information but also as a means to implement the findings of this dissertation.

These perspectives of the project managers and sponsors are what shape and determine the effectiveness of the relationship and affect the outcome of a project. Based on the outcome of this research and analysis a range of a suitable set of guidelines and recommendations is to be created to be applied to subsequent projects. This includes guidelines on best practices and recommendations on possible areas for development in a company’s project model.

2 Delimitations

This dissertation will not cover:

End effect analysis such as return on investment, payback period or other such financial tools but only the effect the manager-sponsor relationship could have on it.

This will not cover in depth analysis of the roles and responsibilities of project managers and sponsors but only the knowledge of which apply and effect the manager-sponsor relationship.
3 Outline

Part 1 - Introduction

This is the current section covering the objectives and outline of this report.

Part 2 - Methodology

This section covers the reasoning and process used to capture empirical data in the form of perspectives of project managers and sponsors. It covers the reasons for using interviews and the chosen interview style including ideas and intentions carried into each interview. Furthermore the sample group, confidentiality and credibility processes used are also discussed.

Part 3 - Role and Relationships in Projects

This section covers the established theory on projects and the main roles of project manager and sponsor covered in this dissertation. The research undertaken prior and as part of this dissertation is presented on the established views on each role broadly, as in the type of person and desired characteristics, and strictly, relating to more specific responsibilities and actions within each role.

The complete format of the data presented between project manager and sponsor is mirrored as part of the side by side comparison process used in this report. The section is summed up into two tables defining both the role and type of person and knowledge identified as important for project success. These tables are comparable and their format carried through the report into the comparative analysis section included in the appendix.

The section continues on to cover the main relational issues identified through research between the project manager and sponsor as well as styles of communication researched. These are summarised into a summary table at the end of the section including the main drivers and challenges for each relational area identified, the format of which is also carried into the analysis section.

Part 4 - Project Outcomes

This covers the established best practice process for collecting, storing and applying lessons learned from past projects. This is summarised in an enumerated list and a table that is carried into the analysis section of the report.

Part 5 - Elekta

This section includes the majority of the empirical data collected from the twelve people interviewed at Elekta Instrument AB, from here on referred to as Elekta. The similar views represented by Wenell Management on the perspectives of each roles and responsibilities, expectations of the opposite person, relational challenges, lessons learned and project success. This is supported by the study of the Elekta lessons learned database and the issues identified within.

Part 6 - Benchmarking

This section includes the empirical data collected from the companies chosen as benchmarks against Elekta and the established theory. Similar information on the perspectives of each role and responsibilities, expectations of the opposite person, relational challenges, lessons learned and project success is included for both Nilfisk and Sectra who were interviewed. This information is presented in the same format as that in the Elekta section for ease of comparison between sections as well as its summation in the analysis section.
Part 7 - Discussion and Recommendations
This is a discussion on the critical areas and issues identified including recommendations on best
practices highlighted in summary boxes within each subsection. This is the main section regarding
the discussion of data collected and is the most critical within the report. Graded courses of action to
mitigate or avoid major issues are also included.

Part 8 - Conclusion
This is a short summary of the findings of this dissertation gained through the comparison of theory
and existing practises and perspectives.

Part 9 - References
This section includes references used as well as a list of tables included within the report.

Part 10 - Appendix
This section includes the semi-structured questions sent to each interviewee prior to the interview.
Also included is a template for comparison of the major issues identified in this dissertation against a
company’s practises. This is generic and can be applied to any company.
Lastly the summation tables from the theory sections compare the theory against the perspectives
of each company. These were used as the method of sorting data and writing the discussions and
recommendations section.
Part II. Methodology

4 Reasoning and Process

In order to determine the effect of the relationship on project performance and outcomes, established and recognised models and theories on the roles of project managers and sponsors were researched and are presented in the first sections of this report. Following this, a series of interviews were carried out and the theory was compared to actual person’s perspectives. The main company being analysed was Elekta where the majority of the project managers and sponsors were interviewed. It was important to interview almost everyone to get a complete picture of the company’s perspective in the area. Where people were not interviewed was only because of the heavy time commitments in their roles that did not allow enough time for them to be interview and the data to be analysed.

Evaluation of lessons learned was carried out as they are both an important source of information as well as an there implementation is a possible path to take to implement the findings of this dissertation. The methodology of both the research and analysis of this dissertation can be broken in a consecutive set of problem statements:

1. What do both project managers and sponsors consider key responsibilities and traits applicable to their roles?
2. What do they ideally expect from the opposite person in terms of information and conduct?
3. What do they do or consider affects relationship cultivation?
4. What management techniques are applied to overcome challenges?
5. What impacts do they see in the positives or negatives of the above on what they determine is ultimate project success?
6. How is this knowledge applied to subsequent projects?

Credibility is a key factor regarding this analysis. In regards to research, any sources used are quoted and their opinions evaluated when including them in this dissertation. Books from well known publishers and authors are expected to be credible. Works from academic articles and other theses are treated with more caution especially when unpublished and are referenced when used and there credibility analysed as part of their use.

Analysis through information gained in interviews is somewhat qualitative since the questions asked and how they were asked during the interviews can affect the responses received. This was taken into consideration to improve the reproducibility of the results gained from the interviews. Interviewees were all professionals in their fields and are therefore deemed to be credible sources of information within the project management field. Furthermore, since interviews were recorded it is expected that information passed over was done so truthfully and thoughtfully.

5 Method of Analysis

Once the capture of information used in this report was completed, the challenge was to sort and analyse it. Firstly, each company was described individually in their relevant section of this report. Following this, the views and opinions presented were sorted into the same tables presented in the theory section of this report. These final tables are found in appendix D. The opinion and perspective of each company was then easily compared to each other as well as the theory. This formed the basis of the analysis and discussion section of the report. Comparing the perspectives of each company was important in understanding the major issues and problems faced by project managers and sponsors in the relevant sections identified in the literature study. The major points highlighted in the interviews are what make up the sub-sections of the analysis and discussion section. The analysis and discussion
of this information was separated into the same major headings used in the theory section of this report, giving the same flow to the theory, individual companies and analysis and discussion sections.

6 Interviews

The interview format was semi-structured in that a set of general questions and themes for the interview were sent to the interviewee prior to each interview. These can be found in Appendix A. The semi-structured format was chosen so that the interviewer had a flexible position to ask new questions based on the responses of the interviewee. This was effective especially when exploring ideas for recommendations of changes to current models used at the companies analysed.

6.1 Reasons for the interview

The aim of the interviews was to capture information to improve understanding in the following areas:

1. Understand the role of each participant as seen as a project manager and project sponsor.
   The foundation of the interview was based on each person’s perception of their own role, responsibilities and personal characteristics. This was important as the source of information in the analysis section when comparing these ideas to the expectations from the opposite person.

2. Understanding each participant’s perspective on the opposite role as applicable.
   Understanding what was expected helped define the nature of the relationship and key areas for success and failure.

3. Understanding the key challenges faced during the working relationship and the extent of their impact on project success.
   This is the foundation of this dissertation and the reason for the choice of semi-structured interviews. It is important to be able to ask new questions during the interview. This helped explore challenging areas and the interviewee’s perspective on ways to overcome these challenges.

4. Understanding the point of view from each participant on what makes for a successful relationship especially the perceptions of an ideal relationship.
   The reasoning for the choice of this theme was to help develop a set of best practices or guidelines as part of the outcome of this dissertation.

5. Understand each participant’s point of view on the lessons learned process and how they apply them to their own work.
   Understanding how participants review and improve personally as well as develop company processes was important in gaining an understanding of how new ideas for improvement are implemented. This was also related to the desired outcomes of this dissertation in offering recommendations for improvement and the means in which to apply them.

6. Understand each participant’s perspective of what constitutes project success was found to be one of the most interesting and challenging areas especially on the side of project sponsors.
   The driving force to reach final objectives is a key point in understanding how the two people can best understand the needs of the other and use that information to have the most efficient relationship possible.

6.2 Sample Group

The companies used as benchmarks have a much smaller sample size and this must be taken into consideration when comparing processes and perspectives of each company since it is only the view of one person in each role.
6 Interviews

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<td>1</td>
<td>1</td>
<td>Single</td>
</tr>
<tr>
<td>Project Sponsors</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>Consultant</td>
</tr>
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Tab. 1: Interviewee Distribution

6.3 Data capture

Permission was asked to record all interviews before they took place. The recorder used was a Black Berry Smart phone and was checked to be recording a few times during each interview. Some summary notes were also taken during the interview but more to make connections or as prompts for further questions as part of the semi-structured style of the interview. Also, included in the notes were any observations made that would not be apparent when playing back the interview at a later time.

6.4 Confidentiality

Confidentiality agreement signed with Elekta and this dissertation was read through and approved by a senior member of management. A similar process was applied for the benchmarked companies.

6.5 Validity and Reliability

Each interview was transcribed into a summary as soon as possible following the interview so that it was fresh in mind and as much information as possible would be captured. The interview summary was then emailed to the interviewee for approval of the information gathered. This was to ensure the reliability and creditability of the information analysed. Figure 1 shows a graphical representation of the issues considered before and during the interview.

![Interview Style](image)

Fig. 1: Interview Style

In order to get the most out of each interview including the most reliable answers a number of points were considered prior to and during each interview. Each interview was begun with an informal conversation and an exchanging of backgrounds to make the interviewee feel comfortable. This was maintained as best as possible throughout interviews [9]. When asking questions, even if longer moments of silence existed, time was given to the interviewee to digest each question before answering. Performing the interview at the speed of the interviewee provided the best results [9]. A conscious effort was made to ask questions, both planned and on the spot, in the most neutral way
possible [9] to prevent preconceived ideas held by the interviewer to be imposed onto the interviewee. Lastly, each interview was approached with a blank slate so that each could be analysed individually without applying assumptions from answers gained in previous interviews [9].
Part III. Roles and Relationships in Projects

This section covers an introduction of projects and some of the key roles. The roles of project managers and sponsors are then explored in greater detail.

7 A Project

According to the Project Management Institute “A project is a temporary endeavour undertaken to create a unique product or service”. Human, technical, administrative, and financial resources are required to accomplish the defined goal(s) it requires [16]. The outcome of the project then falls into one of three categories; success, challenged and impaired [30]. These are completed on time and budget with specified features or completed and operation but over time and budget and with fewer features than originally specified or lastly where the project is canceled as some point in the development cycle [30].

“Project management is the application of knowledge, skills, tools, and techniques to meet or exceed stakeholder requirements for the project” [10].

8 Roles and Responsibilities

Each project has the need for a leader, his or her support, and the team to be led to complete project goals. The leader or project manager is arguably the most important person in a project and is responsible for it’s success or failure. Success cannot be achieved without organisational support often immediately in the form of the project initiator or project sponsor. The project is further supported by groups such as a steering group or the use of sub-project managers within the project. Below covers the roles in theory of the two main players within a project, the project manager and his or her main support, the project sponsor. Figure 2 shows the varies supporting roles a project sponsor could play within a project.

![Fig. 2: Project Structures](image-url)
8.1 Project Manager

There are two major concerns regarding project success, how it is judged (success criteria) and the factors that contribute to the success of projects (success factors). A project manager is a factor in successful delivery of projects and at the same time they must be competent in the areas with the greatest impact on successful outcomes [4].

8.1.1 Choosing the Manager

Selection of the correct project manager can be a very difficult decision that needs to be taken by upper management. When there are a lot of project on the go the decision may be simplified since the choice must be made of available managers. Upper-level management must know the capabilities of and shortcomings of their project managers [13]. The selection process is an upper-management responsibility because the project manager is delegated the authority to cut across organisational lines in order to accomplish the desired objectives successfully [13].

A quick summary of the attributes required that may be “below the surface” and not always purposely considered [17]:

- A strong technical background - competence in the required areas [17]
- A mature individual [17]
- Someone on good terms with company executives [17]
- A person who can keep the project team happy [17]
- One who has worked in several different departments [17]
- Good motivators and leaders, coaching, and teaching others on the team [25]
- “Big picture-oriented” [25]
- Effective communicators [25]
- Good organisers [25]
- Goal oriented [25]
- Lastly and arguably the most likely reason, someone who is currently available

8.1.2 Role

**Broadly** Project managers may have increasing responsibility but [often] very little authority [13], therefore a project manager (PM) must have a varied set of skills

**Knowledge** This refers to what the project manager knows about project management [11].

**Performance** This refers to what the project manager is able to do or accomplish while applying their project management knowledge [11].

**Personal** This refers to how the project manager behaves when performing the project or related activity. Personal effectiveness encompasses the attitudes, core personality characteristics and leadership - the ability to guide the project team while achieving project objectives and balancing the project constraints [11].

**Coordinator** It is the responsibility of the project manager to ensure that the project is managed and executed in the proper manner. In fact, the project manager is a team leader and the ‘boss’ of the team [23]. Projects are often complex and will have various issues arising as they progress. These issues will be both technical and people-based and should be treated differently. It is up to the project manager to get the most out of his team and ensure they are working to their potential. Differences between team members must be respected and when problems arise they must be
dealt with quickly to ensure the smooth interactions between the project’s team members and that the differences do not have any effect on the quality of the project itself. Planning, which is essentially coordinating, was one of the top three most mentioned project manager competencies according to research after 1995 [until 2002] [4].

Leader Real heroes are those who encourage others to act heroically. Leaders make more leaders [28]. Leadership involves focusing the effort for a group of people toward a common goal and enabling them to work as a team [11]. The project manager is also the leader of the project. The project manager must capitalise on people’s strengths, cover their weaknesses, know when to take over and when to “give the team its head,” know when to punish and when to reward, know when to communicate and when to remain silent [17]. He or she should lead by example, and create situations where the team staff look up to the project manager and try to emulate their positive traits [23]. The effects of these can only be positive and the team will respond well to someone they can look up to. Showing positive leadership characteristics is an essential part of being a good manager and leader. Leadership was one of the top three most mentioned project manager competencies according to research after 1995 [until 2002] [4].

Teamwork Any project requires communication and information flow that has to be infused into the team in a systematic and scheduled manner. Information related to assignments is critical to the project success [23]. Reports must be accurate and timely if a project manager is to maintain credibility [17]. Supplying information to the appropriate people in a timely manner is likely to be a big part of this thesis analysis. It can delay milestones and tollgates and effect the overall outcome of a project. A project manager should work effectively as the main source of contact for a project, they can then pass on information to the project sponsor or steering committee as necessary. This applies in the opposite direction as well, where a scenario where a project team is receiving information from a variety of different sources can be confusing and may hamper project progress. They should be a conflict resolver with their team by recognising the determinants of conflict and their timing in the project life cycle [13]. Being the single point of contact should be one of the most important responsibilities of a project manager [23]. Team development was one of the top three most mentioned project manager competencies according to research after 1995 [until 2002] [4].

Credibility This is a two fold attribute the first being technical credibility [17]. The project manager must have and must be perceived to have by senior executives, the project team, the client and other relevant departments to have the required technical knowledge and skills. They need not be the best in any field but rather have the knowledge to interpret the requirements from the customer to the project team and to explain important details to senior management [17]. The second form of credibility is administrative credibility where their responsibilities must be performed with effortless skill [17]. this credibility is built upon timely and accurate project reports as well as appropriately portraying all parties interest to one another, the client, management and the team.

Explicitly - Positives The primary challenge of the managing a project is to achieve all of the project goals while considering the predefined three project constraints – the scope, the time, and the budget. Here are the responsibilities as general job requirements for project management positions [23] relevant to interaction with project sponsors:

Preparing and defining the project scope of work, financial plan, its goals and deliverables.

Identifying resource requirements.

Leading full scale of project plans and executions:

Developing the project management plan [11].

Leading the operational, financial and technological aspects of projects based on time lines and work plans.
Identifying, monitoring, and responding to risk [11].

Employing the types and extent of the management tools to be used in facilitating communications such as status meetings, design reviews, periodic reviews, schedules, budgets, progress reports and team collocation [3].

Tracking project deliveries using project management tools.


Resolving, tracing and escalating critical issues to minimize project risk factors.

Reporting on project progress and communicated relevant information to superiors and company management.

Performing the provisional acceptance and final acceptance procedures, including quality approval process.

Ensuring that the financial issues finalized.

Coordinating the lesson learned process.

Review project performance in regards to end effect when product is first released but the project may not necessarily be closed yet.

8.1.3 Responsibilities

The responsibility of a project manager rests in the execution of his or her role. This fulfillment of which is often directly related to an organisation's Key Performance Indicators (KPIs). The performance against these indicators is a widely used measurement scheme to rate the quality of the work produced by a project manager.

8.1.4 Manager Overview

A project manager must do more than just follow a timeline and delegate work accordingly. They must be a true leader and have the respect of the project team beneath them. The team should be motivated and inspired because of their manager. The project manager should lead by example and take into account the differences in each of the project team members. The effective handling of both the "soft and hard" issues is what will differentiate the good and the bad project managers. The manager should deal with and pass on all important information, whether problematic or complimentary to the appropriate people as it comes to them. They are the main source of information about how the project is going and therefore should handle the responsibility of the projects outcome carefully and professionally. Lastly, it is far more likely that project managers will succeed if it is obvious to the subordinates that general management has appointed them [13] and has their full support.

8.2 Project Sponsor

A sponsor is the person or group that helps secure the resources, in cash or in kind, for the project. When a project is first conceived, the sponsor champions the project. This includes serving as a spokesperson to high levels of management to gather support throughout the organisation and promote the benefits that the project will bring. The sponsor leads the project through the engagement or selection process until formally authorised, and plays a significant role in the development of the initial scope and charter [11].
8 Roles and Responsibilities

8.2.1 Choosing the Sponsor

The project sponsor is someone who must be assigned to the role by either senior management or by the steering group of a project, the role of which is discussed in the next section of this report. Choosing the right person for the right project can be a challenging task however it must be noted that the choice doesn’t always exist. In a company where there is a lot of work and resources are close to full utilisation, the chosen sponsor may be the person with the most free time to take on sponsorship of a new project.

Depending on the organisational structure of a company and the authority and responsibility held by a sponsor. Getting the right project sponsor may not be easy and it may demand some brave words from the project manager, but getting the wrong sponsor is far worse, and often fatal to the project itself [7].

A quick summary of the attributes, similar to those of the project manager, required that may be “below the surface” and not all purposely considered [17]:

- A competent background - competence in the required areas
- A mature individual
- Someone on good terms with company executives
- A person who can keep the project manager and senior management happy
- One who has worked in several different departments
- A person who can walk on (or part) the waters
- Lastly and arguably the most likely reason, someone who is currently available

Reasoning for a sponsor Top management support and the presence of a sponsor are noted in the most important factors for achieving project success [12]. By having this support from the top level of the organisation an example is set for the rest of the organization which in turn promotes employee involvement and commitment across the organisation. The project manager must gain the support of senior management with the help of their sponsor. Being committed to the project with the required backing of a company is essential in the projects success.

This literature review has found that often the role of the sponsor is often missing within a project, or to a lesser extent in some organisations have that have what they call sleeping sponsors. Sponsorship is an active process and one of the keys to project success.

Steering Committee Projects are authorised by someone external to the project such as a sponsor, Project Management Office, or portfolio steering committee [11]. The steering committee is an essential part of all projects for ongoing review and project sign off, as well as providing support to the project manager and their team. The project sponsor shares some of the responsibilities and tasks the held by a steering committee and is many ways should be the main voice for a project, alongside the project manager, to the steering committee.

8.2.2 Role

Broadly

Champion As a team champion, the project sponsor plays a critical role in keeping the endurance, interest and viability of the team alive and well [18]. A project may takes weeks, months, or years to be deemed complete. A project management team will often consist of various people from different departments within a company. Problems arise when key individuals, sometimes even the project manager, leave part way through the project or when personalities clash. A project sponsor must assume the role of “champion” to keep the team moving forward efficiently and apply damage control where necessary, they must act as a unifying force. The sponsor should come from the executive or senior management ranks (depending on the size of the project) and should be influential, a respected politician, and have a track record for getting things done [26].
Reviewer The project sponsor has the responsibility for reviewing the project status from an executive viewpoint [18]. The sponsor should review a project as necessary in both a formal and informal way. In many organisations it is likely this review process will be handled by the sponsor as part of a bigger team called the steering group. The project reviews are from a higher level in that they should review each project in relation to the entire organisation. Some indicators are deadlines, available and required resources as well as over spending in relation to budget. In this way the sponsor in conjunction with the steering group where applicable, acts as a link between an individual project and the company as a whole, when in doubt “the sponsor is responsible for taking appropriate action” [18].

Communicator High quality communication skills are essential in the role of project sponsor. The sponsor is the person who communicates project needs to the project steering committee or executive staff and has the critical duty of insuring the organisation as a whole understands the goals of the project and provides the ongoing support the project needs for success [18].

Diplomat It is seldom a project reaches its goals without experiencing problems along the way. The possible problems are varied, but it is the ones which require diplomacy skills for resolution that can be the most difficult [18]. Problems can arise within teams, and between departments. A project sponsor must present clear facts on the current progress of a project to the required person(s) of authority within a company. They should diplomatically resolve any issues and negotiate any goal or objective changes. These require the ability to manage, co-ordinate, and most importantly, communicate [18]. “They should be adept at rallying the troops (project team and stakeholders), presenting a clear message, and are supportive of the project manager.” “The sponsors authority and stature should be such that they are independent as much as possible of the project’s goals and objectives so they can cut through the political landscape to get critical project decisions made” [26].

Explicitly - Positives A summary of some beneficial activities to be undertaken during a project, many of which are also done or in conjunction with a steering committee but relevant to interaction with the project manager:

Major participation in sales effort and contract negotiations [13]

Establishes and maintains top-level client relationships

Providing direction and guidance for key business strategies and initiatives [26]

Actively participating in initial project planning [26]

Selecting project steering committee members in some cases, although this group may be fixed in some companies [26]

Chairing the Project Steering Committee, again there may be some differences here in the role from company to company

Working with the Project Manager to develop the Project Charter [11].

Identifying and quantifying business benefits to be achieved by successful implementation of the project [26]

Assists project manager in identifying and solving major problems [13], issue and project related possibly by exerting their organisational authority and ability to influence [26].

Reviewing project progress on a regular basis in conjunction with the steering group

Supporting the Project Manager in conflict resolution

Advising the Project Manager of any changes in business direction or policy which may have an effect on the project [26]
Evaluating the project’s success on completion as a part of the project team and manager and possibly including the steering group as well.

Review project performance in regards to end effect some period of time after project is finished.

Compare end effect to original business case.

8.2.3 Sponsor Overview

As Jeffrey Pinto [22] points out, “A project sponsor needs to do more than send a memo to other functional departments, stating his or her support. True championing behaviour consists of a willingness to intervene in development when necessary, contact other managers to enlist their cooperation, secure additional resources when crises occur, and serve as the head cheerleader for the project at high-level meetings.” Support of this nature seems to be a strong driving force behind successful projects, and it is expected that this will be emphasised in the Elekta analysis and interview process.
8.3 Summary of project manager and sponsor roles

The above analysis covers the established views on the roles of both manager and sponsor within a project as well as the relational issues that are a part of it. The main differences being that the project manager is accountable for the success of his or her team while the sponsor is accountable for the project manager’s success. This shared accountability interlinks their roles and implies the best way to a successful project is through an effective working relationship.

Below are summary tables of the key roles for both the project manager and sponsor. The roles are categorised into either process or personal where process is more likely to be found within the role description set out by a company where as personal are traits or attitudes that should be adopted as part of effectively executing each role. The effect of opposite person column is the link between the two roles and the effects each role or characteristic has on the other person. Lastly, the ID number given is to link the two tables together as each ID correspond to the ID in the other table again showing the similarities and links between the two positions.

### 8.3.1 Project Manager

<table>
<thead>
<tr>
<th>ID</th>
<th>Project Manager</th>
<th>Role and Characteristics</th>
<th>Effect on Opposite Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Process</td>
<td>Accountable for the project and its teams success.</td>
<td>Tracking, recording and reporting this to the sponsor is essential</td>
</tr>
<tr>
<td>2</td>
<td>Process</td>
<td>Awareness of the business case</td>
<td>The project manager should always be aware of the business case requirements to be met as specified by the sponsor</td>
</tr>
<tr>
<td>3</td>
<td>Process</td>
<td>Clear description of project objectives given to the project team - sell these to the team</td>
<td>Manager and sponsor should work these out together. Sponsor must ensure they are effectively passed on</td>
</tr>
<tr>
<td>4</td>
<td>Personal</td>
<td>Role model - mentors project team members</td>
<td>The sponsor could or should be a role model for this</td>
</tr>
<tr>
<td>5</td>
<td>Process</td>
<td>Removes obstacles for the project team.</td>
<td>Where not possible on their own it, issues must be quickly escalated to the sponsor or steering committee</td>
</tr>
<tr>
<td>6</td>
<td>Personal</td>
<td>Provide an open line of communication between him or herself and within the team</td>
<td>Mutual respect facilitates open discussions, quick issue resolution and effective decision making</td>
</tr>
<tr>
<td>7</td>
<td>Process</td>
<td>Holds the project team accountable for meeting their commitments</td>
<td>This is necessary to promote project success since the manager is ultimately responsible to the sponsor and steering committee</td>
</tr>
<tr>
<td>8</td>
<td>Process</td>
<td>Timely project reports to the sponsor (and customer in some cases) and the steering committee</td>
<td>Most importantly risks, deviations from project plan and required scope changes. Effective communicative relationship is essential</td>
</tr>
<tr>
<td>9</td>
<td>Process</td>
<td>Facilitates the Project Plan development</td>
<td>To fit into time to market, required quality and budget set out in the sponsor’s business case</td>
</tr>
<tr>
<td>10</td>
<td>Process</td>
<td>Defines resource requirements and negotiates with the executives for resources</td>
<td>Where promised resources are unavailable or additional are required the sponsor must use their authority for support</td>
</tr>
<tr>
<td>ID</td>
<td>Project Manager</td>
<td>Role and Characteristics</td>
<td>Effect on Opposite Person</td>
</tr>
<tr>
<td>----</td>
<td>-----------------</td>
<td>--------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>11</td>
<td>Process</td>
<td>Facilitates the development of the impact analysis for change requests (scope)</td>
<td>Changes and consequences must be clearly presented to the sponsor</td>
</tr>
<tr>
<td>12</td>
<td>Process</td>
<td>Responsible for proving project objectives have been met</td>
<td>Time, Budget, Quality must be met according to the provided business case.</td>
</tr>
<tr>
<td>13</td>
<td>Process</td>
<td>Facilitates the lessons learned process after evaluations are received</td>
<td>The sponsor should give higher level insight into improvements for subsequent projects</td>
</tr>
<tr>
<td>14</td>
<td>Process</td>
<td>Writes recommendations for improvement</td>
<td>Manager-sponsor relational issues should be flagged or actioned where more systematic changes are required</td>
</tr>
<tr>
<td>15</td>
<td>Personal</td>
<td>Knowledge [11]</td>
<td>This refers to what the project manager knows about project management and the specific technical issues within the project</td>
</tr>
<tr>
<td>16</td>
<td>Personal</td>
<td>Attitude and Personality [11]</td>
<td>Diplomacy, problems can arise within teams, and between departments</td>
</tr>
<tr>
<td>17</td>
<td>Personal</td>
<td>Leadership [23][11]</td>
<td>The project manager must capitalise on people’s strengths, cover their weaknesses, know when to take over, when to punish, when to reward, when to communicate and when to remain silent</td>
</tr>
<tr>
<td>18</td>
<td>Personal</td>
<td>Coordinator and Communicator [23]</td>
<td>Requiring support from the sponsor: Issue resolution, project plan changes, resource requirements</td>
</tr>
<tr>
<td>19</td>
<td>Personal</td>
<td>Team Player [23]</td>
<td>The sponsor is a part of the project team and both parties should be skilled enough to work effectively together</td>
</tr>
<tr>
<td>20</td>
<td>Personal</td>
<td>Credibility - Technical and Administrative [17]</td>
<td>Provides mutual respect from the sponsor and from the project team.</td>
</tr>
</tbody>
</table>

Tab. 3: Summary of Project Manager Role [15]
### 8.3.2 Project Sponsor

<table>
<thead>
<tr>
<th>ID</th>
<th>Project Sponsor</th>
<th>Role and Characteristics</th>
<th>Effect on Opposite Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Process</td>
<td>Accountable for the success of the business case</td>
<td>The sponsor should make sure the manager is aware of the business case and its direct relationship to project outcomes</td>
</tr>
<tr>
<td>2</td>
<td>Process</td>
<td>Driver for project success</td>
<td>Once fulfilled, the manager's project goals should ensure business case success</td>
</tr>
<tr>
<td>3</td>
<td>Process</td>
<td>Clear description of business case - sell this to the manager and the rest of the company</td>
<td>Buy-in within the company is essential; support from management and strong project belief from the manager and the team</td>
</tr>
<tr>
<td>4</td>
<td>Personal</td>
<td>Role model - mentors the project manager</td>
<td>Especially beneficial for junior managers but also an additional source of knowledge and support for senior managers</td>
</tr>
<tr>
<td>5</td>
<td>Process</td>
<td>Removes obstacles that the project manager cannot remove on his or her own.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Personal</td>
<td>Provide an open line of communication between him or herself and the project manager</td>
<td>This should always be available especially for quick issue resolution, fast decision making to keep the project on track.</td>
</tr>
<tr>
<td>7</td>
<td>Process</td>
<td>Holds other managers accountable for meeting their commitments.</td>
<td>Sponsor should liaise with senior management to ensure the manager receives resources especially after scope changes</td>
</tr>
<tr>
<td>8</td>
<td>Process</td>
<td>Timely project reports (referenced to the business case) to the Project Steering Committee or Board as well as the customer or client</td>
<td>Project knowledge test in regards to stepping in to report</td>
</tr>
<tr>
<td>9</td>
<td>Process</td>
<td>Reviews and approves the Project Plan.</td>
<td>The pair must work together to ensure the project will ultimately satisfy the business objectives</td>
</tr>
<tr>
<td>10</td>
<td>Process</td>
<td>Reviews and approves change requests (scope)</td>
<td>These must be presented to the manager and answer with the corresponding list of consequences</td>
</tr>
<tr>
<td>11</td>
<td>Process</td>
<td>Responsible for evaluating and proving project outcomes meet the business case</td>
<td>Time, Budget, Quality - This must be met in regards to time to market, within cost to ensure original profitability and at required level of quality to mitigate warranty or repair or maintenance costs.</td>
</tr>
<tr>
<td>12</td>
<td>Process</td>
<td>Additional Source of input into project lessons learned</td>
<td>The sponsor should aid the manager to ensure lessons learned are captured especially on a higher or organisational level</td>
</tr>
<tr>
<td>ID</td>
<td>Project Sponsor</td>
<td>Role and Characteristics</td>
<td>Effect on Opposite Person</td>
</tr>
<tr>
<td>----</td>
<td>-----------------</td>
<td>--------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>13</td>
<td>Process</td>
<td>Takes recommendations for improvement to the Project Steering Committee or Board</td>
<td>Especially relevant to improve project processes within the company to make the future manager-sponsor relationship more seamless</td>
</tr>
<tr>
<td>14</td>
<td>Personal &amp; Process</td>
<td>Knowledge [11]</td>
<td>The sponsor must be adequately equipped with both technical and project management knowledge required on a higher level for the most efficient interaction with the manager</td>
</tr>
<tr>
<td>15</td>
<td>Personal</td>
<td>Attitude and Personality [11]</td>
<td>They should diplomatically resolve any issues and negotiate any goal or objective changes</td>
</tr>
<tr>
<td>16</td>
<td>Personal &amp; Process</td>
<td>Champion [18]</td>
<td>As a team champion, the project sponsor plays a critical role in keeping the endurance, interest and viability of the team alive and well</td>
</tr>
<tr>
<td>17</td>
<td>Personal</td>
<td>Reviewer [18]</td>
<td>The project sponsor has the responsibility for reviewing the project status from an executive viewpoint</td>
</tr>
<tr>
<td>18</td>
<td>Personal &amp; Process</td>
<td>Communicator [18]</td>
<td>The sponsor is the person who communicates the business case to the project steering committee and project manager</td>
</tr>
<tr>
<td>19</td>
<td>Personal</td>
<td>Team Player [23]</td>
<td>The sponsor is a part of the project team and both parties should be skilled enough to work effectively together</td>
</tr>
<tr>
<td>20</td>
<td>Personal &amp; Process</td>
<td>Credibility [17]</td>
<td>Credibility within the organisation goes hand in hand with the authority required by the manager for quick decision making and rapid solutions to requests</td>
</tr>
</tbody>
</table>

Tab. 5: Summary of Project Sponsor Role [15]
9 Project Manager-Sponsor Interaction

9.1 Relationship Issues and Factors

Successful project management includes actively managing interactions to meet sponsor, customer and other stakeholder requirements [11]. Organisations are constantly refining the role of the project sponsor because of the risks of certain projects, where both the project sponsor and the project manager must encourage problems to be brought to the surface quickly so that they can be resolved [13]. More and more reporting is being done informally rather than formally to minimize on formal paper work and save time [13], therefore the interaction between managers and sponsors already lends itself to being an undocument ed one. Today, project sponsors appear to get involved either too little or too much. The involvement is primarily a relationship between the project manager and the sponsor [13]. Eight main categories have been defined next.

9.1.1 Commitment

A Project Sponsor should never be a figurehead position [7]. A Project Sponsor must be committed to a project from start to end just as a project manager should expect to manage a project from start to end.

"Sponsoring a project is not just like running a division, no, it’s not just like being effective in marketing a product - it’s all of this, and more, and different. Project Sponsorship is not an occasional thing, but an active thing, a verb more than a noun, an important commitment that will demand time, engagement and most importantly accountability. And here’s the big kicker that sponsors need to be aware of: whether a project succeeds or fails, a Project Sponsor should be accountable for that success or failure, as much or more than anyone on the project team, including the project manager” [7].

Sharing accountability, possibly in the form of having sponsored projects included in sponsors performance reviews, will help to ensure a sponsor is as committed as a project manager to a project. Having the people of authority within a project committed to its desired outcomes greatly increases the chances of success.

9.1.2 Team Focus

The first team meeting in a project is a good opportunity for a sponsor to introduce themselves to the team and express their commitment to the project, this is an excellent way to start the project with high team spirit. All organisations have a set of goals for both the short and the long term; every quarter, year, five and up to ten years. It is important that the means of achieving these goals and objectives are aligned with the organization, as this would impact the support received from the organization [12]. This fundamental idea is essential and should be applied throughout all organisational activities, including members of staff. The project manager and project sponsor should have aligned goals for each of the projects they work on. If they both want the same result for the project, delivering its outcomes on time and under budget, and work together in achieving that result, then the chances of project success are greatly increased.

9.1.3 Communication - Information and Requests

Great sponsors ensure the project has the right resources to get the work done and great project managers articulate clear resource requests and "right size" the ask to the need [21]. Every project needs people and money to get going and a constant supply of both throughout the project is what makes the end result a success. A project manager should not shy away from asking for more resources if they are required and should provide reasoning why he or she believes so. The project sponsor must evaluate these requests and act as necessary. Without an open flow of information things might be poorly articulated, lack credibility, or are flat-out ignored [21].

Everyone, from top to bottom is committed to sharing information that may be preliminary, but is always honest and open [4].
This is arguably the most important aspect of the manager-sponsor relationship; communicating needs and the consequences of not getting them is a critical part of a project manager's role. A sponsor's evaluation makes up the second half and their timely response is what keeps the relationship functioning well.

9.1.4 Accountability
Great sponsors hold the project manager and team accountable for results. Great project managers embrace the accountability and enforce it with the team [21]. Accountability is a critical part of securing a project's success where the outcome of a project will always in some way reflect on the project manager and project sponsor involved. The project manager and sponsor will work hard when the project is under performing and take credit for their work when it's successful. The project manager has a specific responsibility to embrace the accountability, demonstrate respect for the sponsor with the project team, and cascade the accountability throughout the project team [21].

9.1.5 Issue Resolution
Great sponsors are on top of the big issues and stand at the ready to help resolve them. Great project managers articulate issues clearly and timely and escalate only those they can't solve [21]. The relationship between the manager and sponsor needs to be one of mutual respect and equal footing [21]. Disagreements, opposition and intellectual struggles often occur when two or more people work together, how this inevitable conflict is dealt with impact the project [3], possibly in a very negative way. This is reduced by having equal accountability for both parties.

A manager does not work "for" a sponsor and a manager should not be concerned with "getting a nod of approval". A healthy and open working relationship mean that the sponsor is passed the big issues relevant to him or her and is ready to deal with them as they arise. It is also wrong for a project manager to escalate issues not relevant to the sponsor's role in order to inappropriately try and share culpability or due to laziness. The project manager needs to escalate only those which cannot be solved at his or her level, ensure the sponsor is given as much time as reasonable [21] and presented where appropriate with other courses of action and there likely consequences. Problems are worked until they are solved, people should refuse to fail [4].

9.1.6 Interdependence
Great sponsors are an advocate, coach and battering ram for the project and great project managers know how to leverage a sponsor and listen to the sponsor's counsel [21]. It may be necessary for a sponsor to act as a type of coach for a project manager. Skills and knowledge are passed through the company through a sponsor taking an active interest in the success of a project manager. Furthermore, this will facilitate a better working relationship which is ultimately beneficial for the project and company. It should however be noted that influence should be balanced with competence. It is important for both members to take full advantage of the other person's competencies and that the other person will do as they say they will do. Empowered team members [manager and sponsor] are members who influence through competence and who have the freedom to influence through competence [4].

9.1.7 Reasoned Decision Making
Great sponsors willingly make tough decisions even if unpopular or politically charged, great project managers provide clear and unbiased alternatives, information and consequences to support decision making [21]. Project managers and sponsors have a position of authority within a company and with that comes responsibility. Where the decision needs both the manager and sponsor involved, “the PM has a clear responsibility to provide the sponsor with an objective point of view on decision alternatives, allow the sponsor as much time as reasonable to make the decision, and, while being politically aware of consequences, not be politically driven by consequences” [21]. The sponsor must evaluate the available courses of action and make a timely decision, the project manager must provide objective and unbiased information on which the decisions are based.
9.1.8 Flexibility

Great sponsors continually evaluate priorities and are willing to pull the plug on a project if it no longer makes sense to do similarly, great project managers don’t get emotionally tied to a project and don’t lobby to keep it alive if it should stop [21]. A sponsor initially is given a business case and once the requirements of the project are finalised they know what is expected to be delivered from the project manager and their team. If, along the way, it becomes clear that the project will not be a success, “whether it be about changing priorities, overly aggressive benefit statements, or under-estimated costs, both the sponsor and PM need to keep an ear to the railroad tracks” [21] and stop the project as necessary.

Project team members, especially project manager and sponsor must stay clear about the difference between “nice to have” and “must have” and focus on what constitutes project success [4]. Adding extra, unspecified features will add costs and if not analysed as part of the business case may not provide the required economic rewards. Both the project sponsor and the manager need to be acutely aware of the relationship and recognise the necessity of working together to better secure a successful outcome and provide value back to the organisation [21].

9.2 Communication Media

There is a direct relationship between project success or failure and the effectiveness of the communication pattern carried out on the project [3]. This section has been included at the end of The Relationship because I hope to use it as the foundation for an overall structure or set of guidelines on types of interaction that can be used and referred to by both a project manager and sponsor throughout a project.

A lot of a good working relationship has to do with the trust shared between the team. This is summarised by three main ideas:

1. Effective communication is easier and more likely to be completed between people who trust each other [3].

2. Teams work better together if the people in them can trust each other [3].

3. We are more likely to be accepted as a manager [or in a position of authority] if others can trust us to do our jobs well [3].

Informal This is often dependent on social ties such as friendship, kingship, social status. Joining informal groups at a person’s place of work is not uncommon and it helps to nurture team relationships in the workplace [3]. A project manager must accept that this is a legitimate form of communication within projects or one that will be used. It is a good chance to get honest feedback as the discussion takes place in a more relaxed environment.

Formal This is structured communication and is managed in different ways depending on the forum and medium. Meetings can help the team members know where the individual parts fit into the general collective aim of the group. [3]. A formal meeting should be structured and managed and include: Agenda, relevant participants, timing and location, relevant material and minutes including follow-up and action plan. The project review meetings should maximise the two-way flow of information between parties involved.
9 Project Manager-Sponsor Interaction

<table>
<thead>
<tr>
<th>Form</th>
<th>Formal</th>
<th>Informal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face-to-face</td>
<td>In the form of structured team or project meetings. An agenda is likely to be followed. Held to discuss main project issues from relevant team members. Often followed with recorded minutes and action plan.</td>
<td>Can be held at someone's desk, in the hallway, lunchroom etc. No premeditation and more “casual” conversation. Relaxed atmosphere where ideas can be bounced around and great forum for private or topical feedback to be given. Excellent for building relationships.</td>
</tr>
<tr>
<td>Virtual</td>
<td>Virtual meetings, both aural and visual these days. Effectively the same as face-to-face using modern technology but without both the pros and cons of pre-meeting chit-chat [3].</td>
<td>A short one-on-one phone call or conversation to discuss minor project issues or ask for advice. No formal structure, excellent for building relationships. Quick, cheap, effective.</td>
</tr>
<tr>
<td>Written</td>
<td>In the form of correspondence and official documentation. This must have appropriate content and form. Should be sent when authority on a decision or to record important information.</td>
<td>Most likely in the form of correspondence (eg. emails). This may not have any formal structure. This is a quick and effective means of communicating, especially on-the-go with the use of technology.</td>
</tr>
<tr>
<td>Groupware</td>
<td>May be used a formal referencing tool although generally an informal medium.</td>
<td>Computer software to support team work. Can be used in an anonymous form for feedback. Log on in your time zone without waiting for planned time or date. Log on, track issues, check progress and post answers.</td>
</tr>
</tbody>
</table>

Tab. 6: Formal-Informal Communication

9.3 Overview

After reviewing the above literature there is an abundance of “what works” and “what doesn’t”. A lot of the roles of the two parties are well defined into both what type of person should be in the role as well as what they are expected to do once assuming the role. There is literature on what can be expected and should be worked at to achieve success between the two parties but not as much on how to achieve this, or a set of guidelines that could be used to help. A key point to be analysed in the interviews and company analysis part of this dissertation will be on the perceived role of the opposite party, i.e. what the project manager expects from his or her sponsor. Moreover, a lot of power to influence the outcome of a project rests firmly in the actions of managers and sponsors. How to determine the negative or positive impacts of a good or bad manager-sponsor relationship is critical as it should be kept in mind and applied to each project.

Below is a summary of each relationship area identified previously and has been given a people category if it is personal or people oriented, while the process type relates to company processes directly affecting the relationship issue between project manager and sponsor. Each issue has been further summarised into key drivers that support or promote or key challenges that inhibit or harm the relationship area.
<table>
<thead>
<tr>
<th>Category</th>
<th>Type</th>
<th>Drivers</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commitment</td>
<td>People</td>
<td>Common goals and commitment from team members</td>
<td>Lack of team member commitment</td>
</tr>
<tr>
<td>Team Focus</td>
<td>People</td>
<td>Good interpersonal relations and shared values</td>
<td>Conflict among team member or between team and support organisations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Good team cohesion</td>
<td>Clear project plans and objectives</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Professional growth potential encourages hard work and team play</td>
<td>Unstable project environment or poor job security creates anxieties and the sense for self preservation</td>
</tr>
<tr>
<td>Communicating Info and</td>
<td>People &amp; Process</td>
<td>Clear project plans and objectives</td>
<td>Lack of overall project direction stemming from unclear objectives</td>
</tr>
<tr>
<td>Requests</td>
<td></td>
<td>Sharing information and communicating needs</td>
<td>Communication problems</td>
</tr>
<tr>
<td>Accountability</td>
<td>People &amp; Process</td>
<td>Clearly defined role and authority; includes project outcomes in performance reviews</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recognition of sense of accomplishment</td>
<td>Poor role definition leading to conflict and confusion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Professionally interesting and stimulating work</td>
<td>Lack of role definition leading to conflict and confusion</td>
</tr>
<tr>
<td>Issue Resolution</td>
<td>People &amp; Process</td>
<td>Mutual respect</td>
<td>Poor trust, respect, and creditability of team leader</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Project visibility and high priority</td>
<td>Shifting goals and priorities and resources creates tension</td>
</tr>
<tr>
<td>Interdependence</td>
<td>People &amp; Process</td>
<td>Qualified, competent team personnel with strong knowledge on all roles in the project</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Poor personnel selection lacking bigger picture knowledge outside of the technical aspects of the project</td>
<td></td>
</tr>
<tr>
<td>Reasoned decision</td>
<td>People &amp; Process</td>
<td>Proper technical direction and team leadership</td>
<td>Poor qualification of team or project leader</td>
</tr>
<tr>
<td>making</td>
<td></td>
<td>Good project leadership and credibility</td>
<td></td>
</tr>
<tr>
<td>Flexibility</td>
<td>People &amp; process</td>
<td>Good planning resulting in resource allocation as required by plan</td>
<td>Insufficient resources and lacking of sponsor authority</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Management involvement and support</td>
<td>Lack of senior management of support, interest and involvement</td>
</tr>
</tbody>
</table>

Tab. 7: Strongest Drivers of and Challenges to Relationship Performance [3]
Part IV. Project Outcomes

10 Lessons Learned from Past Projects

By three methods we may learn wisdom: First, by reflection, which is noblest; Second, by imitation, which is easiest; and Third by experience, which is bitterest. - Confucius

A lesson is “an experience, especially an unpleasant one, that somebody can learn from so that it does not happen again in the future” [1].

Lessons learned is a two word phrase that refers specifically to the project management related input and output device that represents the knowledge, information, or instructional knowings that has been garnered through the process of actually completing the ultimate performance of the respective project [20].

The reason this section is included as part of this literature review is because a significant portion of the analysis to be undertaken as part of this thesis will be using an Elekta database on lessons learned. To get the most out of this database I found it appropriate to understand how the lessons are captured and then how myself or Elekta would analyse them to be implemented in further projects. The comments and lessons learned from previous projects is one way to gain a better understanding of a good manager-sponsor relationship.

10.1 General reasons for collecting lessons learned

By continuously tracking experiences and challenges faced within a project, more than just the final economic benefits attained when a project finishes, knowledge can be built up that will save money in future projects. Efficiencies can be increased and mistakes avoided using previous lessons learned while working on current projects. Essentially this section will cover the process of what information to capture, challenges in its capture, storage and access, analysis and application to subsequent projects.

We should collect information to:

- Improve project management processes in terms of efficiencies
- Improve or develop management decision-making strategies
- Assess personnel performance
- Increase organisational knowledge and general efficiencies

10.2 Areas to Capture information

It is important to track and record situations throughout the duration of a project so everything is fresh in your head when recorded. Areas of interest to this dissertation [2]:

- Requirements management
- Scope management
- Schedule development and management
- Resource allocation
- Teamwork or team performance
- Problem solving or issue resolution processes
- Communication management
- Status reporting
• Risk identification and management

For each area (process) reviewed, capture:

1. What is the situation or issue that occurred during the project? [2]
2. What actions were taken or alternative considered to fix the issue? [2]
4. What can be improved upon? [2]
5. Don’t relate lessons learned only to the specific context of your project [5]. It is far more beneficial if the information that is captured can be applied to a wide range of projects and used by a wide audience.
6. Don’t just communicate “what went well” and “what didn’t.” [5]. A simple “this” went well and “this” didn’t does not provide a means for adding value to subsequent projects. A lesson should provide information on how to achieve a desired goal or how to avoid a known issue. For this to take place the “what went well” and “what didn’t” must be analysed and the analysis included as part of the lesson.

10.3 Implementing Lessons learned to a project

A survey from 2007 of 961 experienced project managers found that although 62 percent had formal procedures for learning lessons from projects, only 12 percent adhered closely to them [24].

Having the tools in place and applying them seem to be two quite separate issues, "Although many tools and processes exist for capturing such information at the end of a project, few organizations bother to use them" [24].

Figure 3 depicts a top level view of how to apply lessons learned to upcoming projects. It is very much an ongoing process that should be applied at all stages of a project’s life cycle. This figure shows the cyclic process that should be applied in gathering and applying lessons learned. Lessons are gathered, then applied in the planning phase and executed. The arrow then points back to gathering the lessons learned and either applying them to the next phase or executing them again immediately. The main idea is that this is an ongoing process throughout a project.

Some issues to be considered:

• Since most project managers are under pressure to get a project underway quickly and demonstrate early progress, Reich says it’s important to incorporate the initial knowledge-sharing meeting into normal planning practices, perhaps during the creation of the risk register or during a methodology acceptance meeting or a regular project planning meeting [24]. The sponsor and client where applicable should be involved in this process. This is another aspect of the manager-sponsor relationship.

• Include lessons learned reviews as a front-end activity in the project life cycle. Lessons learned studies are traditionally thought of as concluding activities only. This one-dimensional view fails to ensure their application by future project teams. Some organizations have addressed this problem by including a step near the beginning of their project process that obligates project teams to review lessons learned files as part of their up-front planning. This strategy “closes the loop” on the learning cycle and helps to ensure that the team actually applies these lessons [5].

• Time spent planning will pay off three or four times over in reduced downstream costs (over 30% of most projects is consumed in rework) [27]. When focused on and discussed the lessons learned may be easy to understand with an obvious course of action, they should immediately be incorporated into some part of the planning process to gain benefit from them.
• The last step in this process is to develop a set of best practices that become a part of the working culture of the company and are applied to the every project. The surest way to make certain that the lessons learned are converted into action is to have them incorporated into organisational procedures [19]. Best practice is a procedure or method that over time has proven itself to be better than any other procedures or methods that you were using to do the same thing [29]. Best practices are invaluable because they’re the intellectual assets, the "secret sauce" that can help organisations remain highly competitive [29]. Having these best practices as an ongoing development means that a portion of a company’s intellectual assets are not lost as staff are turned over.

In conclusion, by capturing 20:20 hindsight incrementally and turning it into 20:20 foresight, you will achieve far greater long-term success than by blissfully ignoring or forgetting problems, or by simply moving on when a project or endeavour ends [29].

10.4 Benchmarking

The dynamic nature of business often dictates that an organisation find new and better practices that meet the competition’s approach. This measurement is accomplished to determine whether an organisation is using best-in-class practices for business operations and for development of new performance standards against which to evaluate enterprise. [3]. This brief definition is included as a reminder that analysis to be included of other companies is part of a benchmarking process. This will be especially helpful when bringing in an element of outside influence into Elekta.

10.5 Summary of Lessons Learned

Capturing lessons learned is of vital importance. Unfortunately, it is often forgotten at the end of the project - people just want to move on to the next assignment [2]. I have summarised this part in six main points to capture, analyse and apply lessons learned:

1. Assign an individual on the project (ideally an individual trained in capturing what is learned) to lead the capture of what is learned from the beginning of the project, and tracking throughout all the stages of the project, you won’t feel so pressured at the end to fit it in [2].
2. The more mature the project management function within the organisation, the more likely that lessons learned are captured, internalised and applied to all future projects [2]. Creation of a successful lessons learned culture needs leadership support as well as time and buy-in from project managers. Implementation of a simple process for collecting, collating, analysing and disseminating lessons learned is essential if it’s to be adopted [8].

3. Once lessons have been captured, they need to be made available to all project teams to help them avoid repeating problems of the past. It is important that these teams understand what past projects have to tell them and act upon that information [8]. Mandatory checklist items as inputs into tollgates will ensure managers and their teams access and are reminded of any useful information.

4. Ensuring lessons learned are incorporated within the project initiation phase can be implemented by involving project stakeholders and the project management office. A project kick-off presentation can be used to highlight the lessons learned with the business stakeholders [14].

5. During after action reviews when lessons are captured, action items are drawn up immediately to make a fundamental change or reminder in generic project documentation. A person responsible is named, this is to ensure that generic company project processes are always improving.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Reason</th>
<th>How</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capture</td>
<td>It is important that these teams understand what past projects have to tell them and act upon that information.</td>
<td>End of every project stage review meetings.</td>
<td>Pressure at the end to fit the process in.</td>
</tr>
<tr>
<td>Storage</td>
<td>Made lessons available to all project teams to help them avoid repeating problems of the past.</td>
<td>A simple database or share point where lessons can be stored. This can be very flexible.</td>
<td>A formal storage system may need buy in from other departments - IT.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>This needs to be maintained and accessible</td>
</tr>
<tr>
<td>Application</td>
<td>Make a reminder or a fundamental change to generic project documentation, this is to ensure that generic company project processes are always improving.</td>
<td>A project kick-off presentation can be used to highlight the lessons learned. Action items are drawn up immediately and person responsible for implementation is named</td>
<td>May take time to review old lessons in storage. Not a guarantee that there are relevant lessons for the new project.</td>
</tr>
<tr>
<td>Culture</td>
<td>Implementation of a simple process for collecting, collating, analysing and disseminating lessons learned is essential if it’s to be adopted.</td>
<td>Mandatory checklist items as inputs into tollgates will ensure managers and their teams access and are reminded of any useful information</td>
<td>This needs leadership support as well as time and buy-in from project managers.</td>
</tr>
</tbody>
</table>

Tab. 8: Summary of Lessons Learned Process from Literature
Part V. Elekta

11 Elekta

11.1 Introduction

Elekta is a human care company pioneering significant innovations and clinical solutions for treating cancer and brain disorders. The company develops sophisticated state of the art tools and treatment planning systems for radiation therapy and radio surgery, as well as work flow enhancing software systems across the spectrum of cancer care. The section of the company analysed in this report is Elekta Instruments AB, business area Neuroscience, referred to as Elekta in this report.

The project organisation structure is a more traditional one in that each project is assigned a project manager and project sponsor at project initiation. However, on currently aspects of the role more traditional role are expanded to a chief project manager managing a number of sub-project managers and a product manager. The Product Creation Process, as it is known, is a five tollgate process from pre-study to project closure. In total seven project managers and five project sponsors were interviewed and their combined perceptions are presented in this section, except when differing opinions came up. It must be noted that this section and the amount available data is considerably larger than the benchmarking section ahead.

Finally, included in this section is the information gathered from the consultant interview from Wenell Management. Wenell has been focusing on applications of the project format since 1967 and has more than 40 years of experience in the field. Their services are often focused both on individual projects and on the organization as a whole. Individual projects consulting may begin in a key project start or perform a project review from a neutral outsider perspective. Also included are risk analyses, development of project communication, providing personal support to a project manager, or assisting a project team that wants to improve its cooperation skills. This is supported by training programs offered both open course and tailored training.

The person interviewed was a senior consultant based in Stockholm. This was a unique opportunity to get perspectives from both the manager and sponsor point of view in a form that is applied to training programs held for high level personnel in a wide range of companies. The reasoning behind this inclusion is that the two companies have worked together for almost a decade and their views and perceptions are similar. Elekta employs the use of Wenell as an external party to apply knowledge and influence as part of a continuous improvement of project management processes used at Elekta.

11.2 Role and Responsibilities

11.2.1 Project Manager

Fundamentally the project manager is required to define the project objectives in terms of the product to be produced based on the customer specifications presented to him or her from the project sponsor. They should develop a project plan along with their project team and sell the project internally within the company as well as within formed project team. This includes setting up a communication strategy at the project start to ensure everyone within the project understand the tools and methods to apply to the rest of the project. A part of this process will include coaching and providing support to team members using the strategy presented.

A project manager should foresee and define risks throughout the project and check these risks frequently. The project manager is seen to be the main driving force behind the project and must manage all internal aspects of the project as part of executing the project. Some of the main execution tasks include managing conflicts that develop in the project team, making decisions regarding scope within the project plan or referring them to the project sponsor as required. It is critical that the project manager monitor the balance between cost and quality and compromise as necessary. Tracking the
project budget and securing required resources from line managers or resource owners should be done with the support of the project sponsor if needed, this also involves maintaining a close relationship with many other functions within the company such as purchasing, logistics, manufacturing and other line managers.

While all this is happening the project manager must report project status once a month to the Project Steering Group, referred to as the PSG from here on, and other project stakeholders. Liaising with direct users is somewhat uncommon but this is becoming an extension of the role for project manager especially in larger projects at Elekta as part of ensuring the product will meet customer requirements. Finally the project manager must verify that the project outcomes are met according to the project objectives defined at project commencement.

Wenell Management  The project manager is responsible for managing and leading the team, keeping track of project progress, protecting the project team and clearing the way for it. This involves getting the most out of people in the project especially making sure they have a reduced workload elsewhere in that they are not introduced to a project without finishing off a previous one. The project manager must maintain a strong sponsor relationship as well as create good relations with the people surrounding the project.

11.2.2 Project Sponsors

Importantly noted was the a product manager acting as a sponsor has two roles, an inbound role which is supporting the project manager and project team and an outbound role. The outbound role includes launching products within the sales organisation, attending or running sales exhibitions and attending scientific meetings. The outbound facet of their role is the threat to the support of the project manager and, admittedly, at times a stronger sponsor role could be played if there was more free capacity.

The fundamental aspect of the role of a project sponsor is to be the link between a project and the market. This means finding something unique or a shortcoming in current products, determine what is needed and put a business case together. Alongside this, the sponsor must ensure the product fits within the company strategy and has a strong place in the market, this includes financial analysis of the investment. The project sponsor must attain project priority from the steering group and initiate the project using the evidence from feedback from the sales department, strategy meetings and contact with users. The sponsor is also involved in discussion with the research and development department (R&D) once the product is defined to some point. The innovation and creativity of the R&D group should be used to enhance it.

The business case along with customer requirements document is then delivered to the project and included within is the definition of user and commercial requirements. Once the main goals are established guidelines are set as to what needs to be developed, initially at a higher level and then refining the requirement specifications as the project begins. Generally the project sponsor interviewed saw themselves as a speaking partner to the project manager using their link between customers and the project and their knowledge on Elekta products and customer perspectives to support the project.

The project sponsor also communicates information about the project group to the steering group and management as part of their role as a speaking partner. This is to get buy-in into the project so people understand the commercial impact of the project and also important to get buy-in from the customer, especially within a forum where customers can offer suggestions or comments about a product. Sponsors interviewed said the use of workshops at the beginning of the project to pass over idea description are used since the template for the requirements specifications is good but may not present the complete picture clearly enough.

It is essential that sponsors are able to communicate information to the project manager so that
they understand the clinical application of the product. Sponsors interviewed saw their role being well executed by having great customer relationships and contact while working closely to the project they sponsor. This means that the sponsor is a team member with close contact with R&D, evaluates suggested solutions in both a system and clinical context, prepares for market introduction continuously during the project and especially monitors that the project output fits the foreseen product. A strongly highlighted issue was that the sponsor must ensure that the final product is customer friendly not just engineering friendly. In terms of supporting the project manager in “softer skills”, the sponsors also mentioned they assure, alongside the project manager, that the project has a “calm atmosphere” in regards to the budget and timeline.

Elekta project sponsors generally sponsor one big project at a time and sometimes two smaller ones. However, depending on the portfolio this can vary since the product management team, who most commonly act as project sponsors, is relatively small compared to other departments of Elekta. One project sponsor suggested around at least 40% of a product manager’s time should be spent on a project, more at the project commencement.

Wenell Management A project sponsor is responsible for ensuring that the intended benefits such as the end effects or business objectives of the project are achieved. The project sponsor must support the project manager in securing project resources. The project manager should be negotiating with line managers however the sponsor needs to step in if the project manager runs into difficulties in regards to starting the project or securing promised or additionally required resources. He or she does not necessarily need to be at all meetings but should be interested and active. A required consideration is to “ensure that he or she [the project sponsor] does not step into the domain of the project manager”.

The sponsor should not be involved in the day-to-day management issues. They should be visible, with some contact with the team. “A good time for a sponsor to be visible to the team is when you are in the start up process to a project and when you gather the team for a kickoff...The sponsor should be at the meeting giving his or her view for the project and what the company expects from the project outcome”. Sponsors can often be too passive and remote and the opposite must be encouraged. The sponsor must ensure there is “buy-in” within the company and anchoring of the project including acceptance by line managers and senior management.

11.3 Required Competencies and Traits

11.3.1 Project Manager

As stated by some of the project managers the number one requirement of a project manager is to be results oriented. In general they should not be focused on specific details but rather a top level view of the project as part of being the driving force behind the team. A project manager should be enthusiastic and inspire and motivate the project team. This requires they have good people skills and be friendly and understand how different people work. They should be structured and able to plan, along with their team, showing how the product will be realised from specifications. This includes being able to work alone and make tough decisions reporting the decisions made, especially in regards to problem solving where a diplomatic approach was said to be often taken. It was noted however that this must be done with the understanding of the right level of authority as to what decisions can be made and what need external input from the project sponsor or the PSG. A project manager should also be open minded and able to be challenged to rethink current solutions. This means that should be adaptive and especially flexible to a changing market outside the project and make changes as necessary to the project scope.

A project manager should also have necessary qualifications both technically as to the area into which the product fits and a project management skill set through courses and diplomas or through experience within the company. A good amount of experience was said to have been three to five years before taking on more important and company critical projects. This is a part of gaining the respect and credibility within the company needed to manage and negotiate with people, this is a strong
supporter of the need for a project manager to be a role model. At times when the team falls behind it can be up to the project manager to do some extra work, pull the team back on track and “carry the team” when required. This needs a committed and driven individual towards the goals set up in the project and doing what is necessary to meet them. A high degree of professionalism especially to the level of solutions provided and general quality is also a desired trait and should be used especially when compromises against time are needed.

**Wenell Management**  
A project manager should be someone who does not involve themselves in too many project details. A technical background is preferred “if they can stop being a technician and be turned into managers”. They must have theoretical knowledge and skills through “training and experience”. A good way to develop these in a project manager is by allowing them to work as “co-pilot” or “stand-in” for the project manager and they are there to learn and be in a position to step in incase the original project manager needs to leave.

### 11.3.2 Project Sponsor

Most importantly is that project sponsors must have an excellent understanding of their market and the customer’s clinical situation. This includes having a strong network and relationship with many customers especially critical when determining customer requirements for a new project. A sponsor must have the knowledge of organisational structure and processes in order to best promote and support the project. A sponsor should be open minded, innovative and investigative, which will produce better results from the projects they sponsor. A good sponsor must be a quick learner be able to see the clinical applications and customer needs so that the project maintains its desired direction. A project sponsor must have good communication skills and be able to communicate with a wide variety of people including physicists, doctors, nurses, administrators and all internal company staff understanding each persons priorities and needs.

A project sponsor should have seniority within the company proportional to project size. For smaller projects with a more technical focus, the project sponsor could be not only business but also more technical or application focused. A maintenance or service project has less of a requirement for someone with a technical focus. Fundamentally a sponsor should be a friendly person who is easy to work with and a strong supporter of the projects they are a part of.

**Wenell Management**  
The project sponsor ultimately needs to be a champion for the project in their organisation. There is no need for technical background but they must have technical knowledge and understanding of the project area. Project Management Institute (PMI) certification is not necessary although would be useful. Also importantly a sponsor should be someone high up in the organisation with enough “swing and clout” but not too high up that they become inaccessible by the project manager and the team.

### 11.4 Project manager expectations of project sponsors

The main expectations revolve around the business case of a project and the presentation and support of customer requirements. This should be clearly presented with the “End Effects” being obvious and reinforced especially estimating project costs and timeliness. The sponsor needs to work as part of the team, to answer questions, offer guidance as required and provide support where necessary.

The sponsor is the link between the customer or the market and the project and they should know the needs and demands of the customer personifying themselves as “the voice of the customer” in regards to customer related questions or facilitate contacts between project manager and the user. This begins with the customer specifications. This timeliness of handover and quality of which mentioned to be lacking at time by a number of the project managers interviewed. The sponsor should help to define and set up the objectives and boundaries of the project. These must be backed up by strong sponsor involvement in usability testing throughout the project especially correcting tangential progress of a
The sponsor must show interest and enthusiasm in the project and promote it both internally and externally alongside attending project and PSG meetings. The sponsor should be “daring” to make quick decisions regarding scope especially where compromises are required, and be able to choose some specific functionality over other. This is directly related to project delay, compromises on scope and the need to gain additional resources or increase the project release date.

A few project managers stated that larger projects could have multiple product managers supporting the project.

11.4.1 What makes a good sponsor

A good sponsor is an “interested” one. The sponsor should show constant interest in the project. This means they need to be available regularly to know how the project is going. This needs to start right from the beginning and a good sponsor is enthusiastically supporting the project as it progresses ensuring the project is high on the product managers priority list. This is facilitated by close contact between the project manager and the sponsor where it was said that it would be good to have, yet noted that this may be very difficult, efficient time of one day per week from the sponsor. A good sponsor should attend many project meetings and take an interest in the daily work of the team as time allows. This is both formal and informal contact with the more the better especially in the earlier phases where answers to questions and project decisions are very important.

A good sponsor is also seen to be prepared to reinforce the business case or challenge the scope when required. If changes need to be made due to customer sentiment then these should be proposed by the sponsor as he or she has the customer access. Quick decisions should be made in the areas required and the sponsor needs to be “daring” to make these decisions. A good sponsor is able to see the technical problems and make judgements over scope compromises without getting stuck in the original specifications being flexible and adaptive to issues within the project as they arise. Also an issue was the formation of groups within the project with different views. A good project sponsor must intervene and give customer feedback especially user opinions and requirements, they are seen as a credible source of this information, over and above the project manager.

A good sponsor constantly reminds the project manager and especially the team the need to get to market on time. This leads itself to a strong feeling of accountability where a good sponsor feels responsible in most scenarios together with the project manager. One critical factor noted by project managers was good sponsor support of the team and project manager when a project is slipping. An effective sponsor is understanding, accepting and defends the project as to why its late whether it be due to design difficulties or scope changes. Ultimately a good project was seen to have big sponsor involvement with strong support backup up with clear user or customer feedback. This may be informal but a lot of value it placed on having a good interactive loop within the project so that there are no surprises at the end of the project during validation and release. Constant involvement and interest meant everyone knew product status and functionality compared to customer requirements. A highly desired aspect of this involvement and feedback is for project sponsor to facilitate, at least initially, the use of user reference groups for validation throughout the project, the need for this was highly stressed.

**Wenell Management** A project manager can reasonably expect a sponsor to be present at the project kickoff meeting. In terms of availability, in general it should not be an issue, assuming the sponsor is not traveling, to meet a sponsor for discussion on two day notice if daily is not possible. The sponsor should not be too high up in the hierarchy where a meeting needs to be set up. They should be available for informal discussions. They are expected to provide decisions on which alternative to choose regrading a product’s functionality for example, especially those that have a larger impact and are budget related or a discovery that original project goals cannot be realised and scope changes are required.

A sponsor is expected to have shared accountability alongside the project manager. The sponsor
is expected to be responsible for the business objectives and ensure that the project manager fully understands the business objective even though the project manager is not accountable for them. There should be a fostered relationship between the project manager and sponsor to make them both feel responsible for project success. “The sponsor should not be remote or come in as a prosecutor where the meeting resembles court justice” especially when things are not going well.

11.5 Project sponsor expectations of project managers

An analogy used in a number of the project sponsor interviews was that the the sponsor is a chairman of the board and the project manager is the CEO in that a symbiotic relationship should exist. All daily activities should be run by the “CEO” while guidance, external funding, and strategic discussions are made and come from “the board” i.e. the project sponsor. Emphasised as part of this was the need for the sponsor to be a working chairman and should not turn up once a month for a status report.

A project sponsor expects the project manager to be the main speaking partner in the project and maintain continuous dialogue with them. It was noted however that Elekta has expanded a lot, particularly R&D while product management has not expanded equally and may need to be “beefed up” as well. At times it is not possible to be the speaking partner with the project manager, especially when a project is running at a fast pace and a sponsor has many commitments outside of the project; “a lot can happen in 3 weeks”. A project manager is expected to be understanding that a sponsor’s time on a project will vary and may be from 10% to 100% at times which was said to be especially important when compromises on scope and time need to be made. A project manager is expected to provide relevant information to the sponsor through the steering group update process, status updates part of meetings and a continuous dialogue all through the project. This is especially important in smaller projects as larger ones tend to have a much stronger formal reporting and updating process that can be used to keep up to date. The sponsor expects to be in the loop on progress and issues which works well when the project manager has defined a communication process early in a project. The sponsor is in some way “ordering” a product, the project manager should understand that they need to fulfill this order with a complete product. The project manager and the team are expected to support the sponsor with knowledge on possible solutions to the customer requirements.

A project manager is expected to have a strong technical understanding of the technological issues, especially with new technology and should be able to foresee the final product early on in the project. He or she is expected to have strong administration skills in terms of managing meetings, the project plan and over continuous tracking of the project cost and time plan. The project manager should be agile especially at the start of a project in regards to project scope and product requirements and secure the resources required for the project as they change.

11.5.1 What makes a good project manager

The most emphasised point through the interviews were the benefits of continuous dialogue between the the project manager and project sponsor. It was noted that different project managers have different style, the good ones are very transparent and deal with issues as they come up. They are flexible, take the initiative and apply a broad perspective across a project especially when a project is heavily modularised and avoid the case where each module is driven to be finish according to its specifications. With a broader view making a change in two separate modules can make the whole project better. Project managers that are linear in that they define, monitor and then drive to deadlines are seen to be less preferred.

The sponsor expects to be invited to the different important forums and meetings as guided by the project manager. The project manager should know which meetings the sponsor should attend to get relevant information. Noted alongside this is that it is expected that 80% of communication is informal. The sponsor expects that the team feels comfortable to approach the him or her directly in providing feedback. A good project manager was said to understand the situation of project sponsors
especially regarding sponsor priorities and manage the project around it as possible.

A good project manager needs to be someone who dares to make decisions. This must be backed up by knowledge and experience, which means that a good project manager knows when to and when not to take decisions alone, definitely when they do not feel comfortable. This is where the sponsor supports the project manager to make big decisions together.

A good project manager is interested in expanding his or her knowledge of the market. The more contact with the market the better, “it can’t be too much but time is a limiting factor”. This may be facilitated by the sponsor through their product manager role however there is no formal structure for this. More interested project managers who take the initiative and want to get that extra knowledge from the customer which may be the actual user or perhaps a business unit of the company in another country. A good project manager should be prepared to travel and visit customers to know what they want or how they think and perceive product quality which may require travelling further than to just a hospital. A good manager could have their own contacts within the market and is proactive to make visits themselves, alone. This is related to understanding of the business case where it was stated “the better the understanding of the business case, the better”, a good project manager understands “the product needs to pay salaries”. A good project manager understands that “we are not selling technology, we are selling a product”. The final outcome should be a clinical solution that is applicable to the market.

In terms of personality and skills a good project manager was mentioned to be a confident and strong person that is able to communicate well within the company especially in securing resources. These strong people skills are used by a good project manager along with their understanding of the dynamics of the company knowing who to go to for different requests and how to approach each type of person. A good project manager is more than just innovative, another factor highlighted in a one of the interviews was the value placed in a project manager’s knowledge of recent developments in other industries whose applications have some relation to the current project. Such as the investment of time and money into new materials developed externally that could be used in new Elekta products and solve an issue quickly without Elekta re-doing the same thing.

**Wenell Management** The project sponsor can expected the project manager to have a good understanding of the business case. The project manager is expected to report project progress and status and turn to the sponsor when they need support, but with the right issues, not project details. If a project gets stuck, and resources are required or were not given as originally allocated, the sponsor must help. However, the project manager is expected to go to the line managers first, then go to the sponsor if they do not get the required (additional) resources.

### 11.6 Project Manager-Sponsor Relationship

Each challenge has been organised into a heading with the main points highlighted beneath it.

#### 11.6.1 Project Manager Challenges

**Sponsor Availability** The main challenge faced at Elekta and highlighted in almost every project manager interview was access time to the project sponsor. Sponsor presence was said to have a large effect and noticed effect on the project team. The availability is an issue because the project needs more information from the sponsor in terms of customer feedback and general project support within the company. There were a series of recommendation that came out of the interviews to deal with this, they are analysed in the analysis section of this report but wholly presented here as they were initially defined.

- Extension of the role in that the project manager spends time meeting more customers and doing project pre-studies
Where this has happened it was said to be a strong positive especially in regards to more overall experience and job satisfaction as a project manager.

This then requires sub-project managers to do some of the work he or she would have usually done.

- Sponsor spend less time with earlier/completed projects
  - Less time perhaps could be spent on system start ups, education and training, and marketing activities and supplemented with the increased used of product application specialists as used at the Elekta offices in Crawley
  - Product management has a lot of responsibility outside of the project and at times sponsors need extra support to help maximise their available time to spend on the project

The increased use of reference user groups facilitated by project sponsors using their customer network. These were said to be used but largely in major projects and the suggestions given were to have mandatory use of them in all projects to which they are applicable.

The lack of time directing a project shows up when product validation arrives and by then it is late to make that should have been picked up earlier. Project managers manage product validation and was said to be tricky at times and the project could benefit with increased product management involvement here. The issue is compounded by the knowledge shared by most project managers that the product management team is relatively small in the company. Project managers suggested they needed more efficient use of a sponsor's time in coordinating feedback meaning less fragmented time and something closer to a continuous half day and face to face project sponsorship time once a week.

Wenell Management Lack of sponsor availability may be a result of a sponsor often being usually “higher than a [project] manager” within a company, which is a positive factor. The project manager must “try to convey to the sponsor the need for active engagement”. The need for sponsor availability should not be underestimated and it is possible that during a project risk analysis the biggest risk could be the sponsor’s ability to support a project. This could be due to the fact that a sponsor is sponsoring many other projects at the same time and therefore could not sponsor another one. An effective project model, applied at Elekta, is one manager per project. There is no such model applied for project sponsors.

A sponsor should be able to sponsor more than one project but once two or more projects are sponsored the work limit is reached. This is based on the type of projects, if the rest of a product manager’s role is time demanding then one project at a time may be the maximum. The worst case is when the sponsor does not realise that he or she needs to get involved, and keep contact with the project manager and can result in project delays. Ultimately it is up to a good sponsor to set aside enough time and there is no need for formalising a process and forcing them into a certain amount of time. This is part of their understanding of their role. The company should advocate training to create this awareness.

Project Input/Design The next challenge discussed at length in the interviews was the handing over of project input, such as documentation, especially with reference to customer specifications from project sponsor to project manager. The issues faced are:

- Timeliness in that customer specifications must be prepared and handed over completed on time
- Lack of quality of the customer requirements making the complete product requirements or functionality unclear
  - In some cases without adequate documentation and presence meetings cannot go ahead and the project may be delayed
  - This includes design reviews before tollgates where without the sponsor presence and signature the meeting may not be valid
Scope Creep  The next challenge that was also emphasised in most of the interviews was ‘scope creep’ where more scope is added to a running project resulting in changes in cost, resource requirements or project delay. All of these changes must be clinically motivated. The changed needs to be discussed between project manager and sponsor including its need and consequences where generally weighed up are project time against additional functionality. A project manager is expected to compromise and not just flat out refuse, but rather enter into a constructive discussion. The two people must estimate the additional effort needed and whether the consequences can be effectively dealt with.

This was noted to be a smaller issue while the project is before the Start Realisation tollgate where the project may not yet be committed to hard targets. After tollgate two more projects are successful by being very cautious and scrutinising towards suggested scope changes. The opposite was also highlighted in a number of interviews in terms of sponsors pushing for time over increased scope, sponsors should be less back loaded and more front loaded in their push of a project. This was that sponsors often push time and project deadline hard throughout the project and are more focused on taking time at the end to ensure the product is meeting specifications and working properly. This should be the other way around and more time should be spent earlier on in getting things right, instead of pushing to release and then being cautious in the project’s final stages.

Sponsor project ownership and accountability  The interviews with project managers strongly reinforced the opinion that project at Elekta are very much identified according to their project manager, this was not judged to be a bad thing. The majority of the responsibility lies on the project manager however there was also the general opinion by most project managers that at times there is a lack of feeling of project ownership or accountability on the part of the project sponsor. This sentiment extends to the opinion that product management may alter and change project scope and project requirements with success or failure resting largely on project managers.

A lack of accountability stems from a lack of project interest especially in more technical projects that are less interesting to a product manager. There is currently no formal process in place to judge project sponsors based on the outcome of the projects they are a part of but it was emphasised by a number of project managers that the sponsors have a strong impact on this outcome and can be a very significant help to the project manager. The semi-structured nature of the interviews generated discussion on possible courses of action to help overcome this challenge.

It was suggested by some project managers that Elekta could include project in the performance review of project sponsor however some managers were unsure of the extent of positive effects this will have. The point was that in the case of project sponsors there could be a stronger weighting towards individual and specific project data and outcomes, to encourage them to continuously support the project manager, perhaps with less performance focus on portfolio targets.

Wenell Management  A project manager should always feed progress information in a project to a sponsor, this may be to try to get the sponsor involvement, almost against their own will. The overall situation should always be presented and known including main problems, important decisions to be made, any need for support from the steering group or sponsor. The sponsor should not order something from the project manager, then once the assignment is handed over not be active or involved. It would not be acceptable that a sponsor expects the project manager to work and deliver alone, this jeopardizes project success. A sponsor should be expected to step in on one day’s notice and present to the steering group on the current progress of the project. There should be more involvement than just meeting once a month for five hours to discuss a project, this would be a remote sponsor. Five minutes each day is better and would be beneficial to apply it for the entire duration of the project.

11.6.2 Sponsor Challenges

Sponsor Availability  Project sponsors brought up the same issue of the available time to support projects as a major challenge in the same way project managers did. Sponsor’s admittedly may spend
a month with little to no contact with the project and the team. This brings about the risk that the project moves in the wrong direction. It was a general opinion that for stronger sponsorship the product management group need more capacity and there is a strain on the project manager-sponsor relationship because of lack of sponsor time. It was noted that project managers and sponsor are aware of this and continuous dialogue is maintained to address it but more may need to be done.

Project sponsors felt one major project at a time or two smaller projects at a time was an appropriate sponsorship workload. An interesting point that came out from the project sponsors was that having available time is easier on bigger projects as they are more important and become a main focus of your activities. Smaller projects at times do not get the same attention especially when there is a lot happening in the other part of a product managers role. The risk here is that a project goes in the wrong direction or an engineer makes a decision that is excellent in engineering terms but poor strategically and/or with less customer value. The semi-structured nature of the interviews allowed for some discussion of possible courses of action:

- Separation of sponsor role was a something that was both supported and disliked by sponsors that were interviewed. The role was suggested to be separated into an inbound role where the product managers are sponsors and an outbound role where those product manager are involved in a lot more product launches and training programs. This idea led itself into the next main point of discussion with project sponsors regarding their time.

- Some of the project sponsors stated that product management is trying to establish more of an application engineer base to support work outside of project sponsorship. This application specialist could run training courses as well as participate in product evaluations since they have spent a lot of time in the field.

**Scope Creep** Scope creep and the opportunities to include more into a project was another big point of discussion in the interviews regarding the interaction of project managers and sponsors. The reason for this was summed up by one of the project sponsors in that the sponsor generally “wants faster, sleeker and earlier while the project manager wants quality, control and perhaps later” in that they would prefer to take more time. This is mitigated by higher sponsor involvement within the project so that the sponsor understands the product and is a strong part of it’s validation throughout the whole project.

Scope changes should always be made together between the project manager and sponsor unless there is substantial change requirement in scope requiring a substantial change in required project time or resources. In this case the decision should be referred to the steering group as there may be effects on other projects and their resources. Scope changes were discussed as both the addition as well as the compromise of different product functionality and it was noted that these can be intense discussions. It may be necessary to compromise and find a reasonably good solution with some scope cutting, especially when a project is slipping, which is a big responsibility of the sponsor to ensure the right decisions are made here.

Some project sponsors felt project managers do not want anything changed that can jeopardise delivery of a product in regards to time or cost. Project managers need to be encouraged to see the broader picture of the project especially where an overall change may not be significant. The project manager should be open to this and take part in the dialogue.

**Knowledge and Decision Making** A challenge also discussed was a the lack of both project manager and sponsor lack of technological “know how” in the product area especially when it is new and cutting edge technology. Some solutions discussed were:

- An external consultant can be hired to help supplement this shortfall.

- Good trust of the people within R&D to make the correct decisions on their own, without consultation of the project sponsor.
• An idea discussed by one of the sponsors interviewed was that not taking decisions means you end up in meetings. Meetings that are often in the form of workshops to ensure consensus, noted that this is somewhat related to Swedish culture, however this is time consuming.

A second issue in this area discussed was a project manager lacking a full understanding of a product requirements. This was said to be due to a high volume of information at a project start and the project administration that comes in at the same time. The result of which was said to be that too much time is spent speculating on possible solutions and on internal administrative issues. Courses of action to overcome this that were discussed were the facilitation of meetings with chosen people in the market especially by visiting a hospital or clinic. Also noted was that some users can be stuck in the way they do things as well therefore meeting a variety of people is necessary.

### 11.6.3 Ideally

An ideal relationship, suggested by both project managers and sponsors was said to contain the following features:

- Mutual respect
- Clear lines of responsibility, each person may have a different role but they always share the same view on the direction for the project
- The more time spent together the better, supported by a continuously nurtured open line of discussion
- A project sponsor with high authority within the company who can make decisions without consulting others.
- Sponsor that continuously gets feedback or facilitates user feedback on product development in the form of meetings and site visits.
- The two people get along well, this is a softer issue but highly valued.

**Wenell Management**  An ideal relationship is described as one of mutual respect and more so where the two people get along in terms of any positives that make up any good working relationship and they should always be on good speaking terms. It is not good if there is a lot of “prestige” or point scoring between the two and could be a source of tension. However, it must always be alright to challenge the other person in a respectful way and the challenge should be welcomed. This is facilitated by relatively frequent contacts through phone calls, face to face meetings and the formal meeting process.

Ideally both people know and understand the opposite person’s role and neither tries to step into the other person’s role. This is directly related to a project manager not making decisions that affect the schedule or budget as the sponsor must make this decision. Conversely a sponsor should reject a discussion about details from the project manager unless they are related to major changes being required. The project sponsor is ideally someone “high up” with sufficient power to make things happen to support the project. This is compromised by the fact that someone high up is often less available.

### 11.7 Lessons Learned

The lessons learned process already exists at Elekta and the general consensus is that the lessons are captured very well by project managers and their teams. All projects must captured after each tollgate or significant milestone and then stored lessons in a database. The general consensus is also that Elekta has room for improvement regarding the application of knowledge gained from the lessons learned process. A point highlighted alongside this in most of the interviews was that at Elekta there is low staff turnover meaning that most people have been involved in past projects and can advise on new ones but generally this is only done informally.
The main issues that came out of the interviews was that it is not mandatory to check or refer to the database into which all the lessons are stored and that when used it was difficult and time consuming to go through the database and it is preferred that the project closure reports are read instead. A number of the project managers interviewed had rarely if ever used the database. On a similar point it was also mentioned that some project managers have seen uncertainty from their project teams as to why this process is done since they had rarely seen the use of the information captured.

Some of the suggestions that came out in the interviews were:

- It should be a mandatory checklist item before each tollgate especially while creating the project plan to check the database for past projects in similar areas. This could be in the form of a run through during the project kick-off meeting. Although the discussion around additional checklist items was seen to be a somewhat negative course of action by some of the managers interviewed.

- The database should be more available to people other than project managers

- Lessons learned should be applied informally through discussions within the project team and between project managers. This was said to be easily facilitated by an excellent project office culture of openness and support that exists at Elekta.

- Supplemented perhaps by having two project managers paired to mentor each other for some time, this could be rotated.

- Improving the database in that more time by someone is needed to be spent on compiling lessons into larger lesson categories for easier reviewal. More search features for project managers to better sort through the lessons so each project manager can check him or herself.

- Lastly it was discussed a two of the project managers that the best course of action would be to hold six monthly workshops where the database is compiled and lessons, both positives and negatives, are worked through. This may be followed up by an action list for improvements and changes to be made allocated to individuals within Elekta.

**Wenell Management** Continuous learning through a project is highly valued. Each tollgate should have a lessons learned discussion, especially at the start of each project, to be applied to the upcoming phase. Part of the tollgate process could be to look into lessons learned to see what can be improved during the next phase. Some of these will be internal to the project team so may not be brought up at the tollgate meetings. This should be more than just doing a “post mortem” examination on a project. In general two time horizons are assumed to exist, short and long term. Short term covers project team issues that can be implemented almost immediately or continuously. The project manager should continuously evaluate what went well with the project team. Long term covers the continuous improvement of the overall project process.

### 11.8 Steering Group

There is one fixed steering group that exists at Elekta with a smaller group of people who sign off on project updates and especially on the completion of tollgates. It is a forum to top level status updates and not technical questions. Members of the steering group are also resource owners and so are responsible to sign off on resource, cost and time line changes for projects. The steering group meeting is also attended by a number of people not directly related to the project and in some ways also acts as a reference group to the project manager in that they are expected to “sweep the floor” for the project manager and make the project process as smooth as possible. It meets once a month and usually consists of around 15 to 20 people.

There were varied responses from both project managers and sponsors on the ability, due to knowledge, for a project sponsor to be able to present on behalf of the project to the steering group. The
project sponsor should at least present on any customer requirement changes but a comment that
came up in a number of interviews was that it would be a good test of a project sponsors project
involvement if he or she could present on project status to the steering group. At the same time a
few of the interviewed project managers did not expect a project sponsor to have this knowledge and
would prefer to have another member of the team present in their place if they would not make the
meeting. It was suggested by some project sponsors that there should be increased project sponsor
presentations if for no other reason than the symbolic value for the project showing the commitment
of the project sponsor to the project team.

The general consensus is that the project sponsor should be present and presenting an allied view
alongside the project manager. This helps to promote and continue to sell the project within the
company. A challenge mentioned was that it is ineffective to highlight questions, in particular from
the sponsor, at the steering group as it is more of a formality in regards to tollgates as approval should
be secured informally beforehand. This is applicable unless there are high level issues that need to
be discussed in the complete forum with everyone present. This may be the case on critical resource
changes or sensitive project issues.

**Wenell Management** Wenell is an advocate for the sponsor to be the chairman of the steering
group. The steering group is a supportive group for the sponsor and the project. The sponsor should
be mandated to make decisions on his or her own on the project without consulting the steering group,
however a wise sponsor should consult the steering group. The accountability of these changes is on
the sponsor. The project manager is responsible for status reporting and making clear what decisions
they need made for further project progress to the steering group. This should be results oriented
reporting and there should not be discussion about project activities within the plan at steering group
meetings. The discussion should be around the results a project manager wishes to achieve.

### 11.9 Project Success

#### 11.9.1 Project Manager

The general consensus from project managers was that they are fundamentally judged on meeting
project objectives. This is means they are measured against the Key Performance Indicators (KPIs)
used by Elekta of time, cost and quality.

Time and cost are accepted when they are within margins of error while quality is acceptable when
a product passes the verification requirements set out within the project. Closing a project is not
only a symbolic measure of success but it means that the first customers have the product, it has
been tested, X amount of units have been produced and there has been some received and applied
customer feedback. Technically responsibility for the project manager ends at the closure of tollgate
five, Project Closure. tollgate four, or Start Delivery which is the time for product release, the product
is essentially handed over to the installations team and product management. This is the surveillance
period between tollgates four and five where feedback on the product can be taken and the first sales
are measured. This was noted as a good time of evaluating product success but since this is generally a
short period, less than six months, and the roll out of a product after product release takes time. This
is generally thought not to be long enough for a conclusive product evaluation in terms of reaching the
desired project end effects.

Also there is a measure of innovation in regards to patents secured as part of a project outcome
which is part of Elekta’s innovation strategy. This was noted as less applicable to maintenance projects
or service projects.

#### 11.9.2 Project Sponsor

It was noted that realistically commercial success is the main measure with desired outcomes such as
good return on investment and a fast payback time. This is related to how the product is received by
the market. Supporting the project to ensure it is on time and at cost is also part of project sponsor’s measurements. Project sponsors noted they are accountable for project success but not all aspects such as wrong estimations or other project specific details that go wrong are in the hands of the project manager. However if these issues could be addressed earlier and fixed then the sponsor should act since “sitting back is not acceptable”. Many product related issues were said to be picked up during the surveillance period, this is also an a good measure of the first acceptance of the product into the market.

A softer success issue is related to a natural flow from project closure to the product being in the hands of the product manager. This product development to release is considered successful if this happens. Importantly it was said that all product lines are included as part of budgeting however they are not specifically compared to the business case therefore expected sales or repair and servicing costs are not compared to their expected values. Conflicting opinions were presented in this regard in that some sponsors did mention that sales volumes are looked at and compared to the business case. The commercial aspect is valued however admittedly it is often too early during the surveillance period to know a products return on investment or payback period. As part of this the surveillance period was noted not to be used in all project since it costs resources of cost and people. Ultimately the consensus was that no formal procedure is in place to measure profitability of a product compared to it’s business case. It must be noted here that this is not applicable to all project since many products are quite integrated and the project may be related to promoting sales installations, upgrades to users or sales in conjunction with new sales.

Alongside the above mentioned information on the surveillance period was the opinion that the project should not be closed too soon. This is very important in regards to service issues since they come up during the surveillance period and service issues should be fixed prior to closing the project. It is expensive, inefficient and time consuming to start a new steering group project to fix service issues and “if you really want to know true feedback a year [of surveillance period] is appropriate”. This is related to the issue that although the Start Delivery tollgate has been taken and product release has occurred “start delivery” but may not yet be approved in many places to be sold. This means the product cycle is slow in some areas and more time may be needed to gain appropriate customer feedback.

11.9.3 Wenell Management

Project success should be judged by the extent a project reaches its business objectives. The project manager must meet project objectives within the assigned time and resource frames. The business objectives are more important and are the ultimate measures of success. It was noted that very few organisations measure three to five years after a project and assume that if the project finishes on time and within cost then it is successful. The sponsors responsibility does not end with the project being formally closed and should end when the end effects or business objectives have been followed up. This should be easier at Elekta since a natural flow exists as the sponsors go on as product managers and can monitor products in subsequent years.
12 Elekta Lessons Learned Database

12.1 Introduction

The lessons learned database held by Elekta has evolved over time in both content, form and systematic use. Initially lessons were compiled from past projects by reviewing project notes and sorting data into a spreadsheet by category and type of lesson learned. This was done by individuals looking back at the end of projects collecting information put down by project managers. In its current form it is added to by project managers after discussion with their team after each tollgate or any other major milestone of each project. By assigning an individual on the project, in this case project managers, to lead the capture of what is learned from the beginning of the project, and tracking throughout all the stages of the project, there is less pressure at the end of the project and the lessons are always fresh in the minds of the project team. This is by far the most effective form of the database and is aligned with best practices models as discussed in literature.

In terms of applying lessons learned, there seems to be no formalised approach yet in place. Ensuring lessons learned are incorporated within the project initiation phase can be implemented by involving project stakeholders and the project management office. A project kick-off presentation, as well as at the start of each tollgate, can be used to highlight the lessons learned with the business stakeholders [14] as well as the project team.

12.2 Lessons Learned

Below is a summary of lessons learned applying to this dissertation in terms of capturing and applying the lessons and then the roles and relationship between project managers and sponsors. The capture and implementation of lessons is part of how to mitigate or avoid negative effects of the manager-sponsor relationship in subsequent projects.

As it stands Elekta has a strong and effective process of capturing lessons at each stage of the project through facilitated After Action Reviews. The lessons are discussed in a forum where the project manager and project team are present and so give a comprehensive set of reminders and positive or negative events and elements of a project. This reason for its inclusion in the report is two fold, firstly the content included in each lesson as well as it important to this dissertation the lessons could be reviewed and implemented in the same way guidelines or recommendations for manager-sponsor interaction could be.

The database was searched in its entirety and the lessons contained within are very specific points of information and have been extracted accordingly. It must be mentioned here that not all projects completed by Elekta are stored here as the database is relatively new and is still developing. The lessons have been sorted in this report into the same headings as those used in the theory and empirical data sections of the report.

12.2.1 Project Manager Role

The lessons learned correspond to the literature and most of the interviews conducted as part of this dissertation under this heading of the role of the project manager:

Driving-Force A positive lesson states that it was good that the project manager was engaged, positive and focused and actively pushed the team throughout the project.

Report-Progress One of the lessons with a negative impact was where there was a lack of information on project progress delivered to the organisation. Furthermore the project steering group would be a main forum where progress is formally reported on and should be attended every time.
12.2.2 Project Sponsor Role

Project sponsorship is an important commitment that demands time, engagement and accountability [7]. This means the sponsor should be there from project kickoff to project closure, and arguably beyond to ensure a business case including a pay back period is successfully executed. Lessons recorded as part of project sponsor expectations by the project team and project manager were:

Promotion The sponsor should promote the project to all stakeholders - It is suggested that a prepared kickoff presentation should be held and divided into areas for the creative process of listing activities. It was also noted that there were negative effects when there was no clear project start and directives were received from multiple sources within the organisations.

Clear-Expectations When project sponsors performed well, this was also noted in the lessons, "The project sponsor was acting excellently, he or she was clear on what he wanted and came up with good and useful feedback during the project. It was consistently the sponsor or project manager team report at steering group meetings".

Scope It is important to have clear scope and there are negative impacts of not having it so. Furthermore it was emphasised that it was more important to have a clear scope for a services project in comparison with other types of projects.

Right-Person Especially important in regards to service projects, is that it is better to have a sponsor from sales and marketing or product management. In this case it was found to be difficult to get full sponsor support as the sponsor was lacking somewhat as a driving force “helping pushing things forward”. It was noted that the sponsor needs to be acting in a positive manner in order to get a team willing to overcome all difficulties encountered, especially in projects related to known difficult project areas.

Customer-focus Project management, also mentioned as “the voice of the sponsor” during project interviews, must be present in all projects. The lesson learned described was that without this support the project is delayed or “in the worst case come to a complete standstill when missing product management feedback or answers on specific questions. A suggestion made in the lesson was to hold weekly project meetings that give the team access time to the sponsor for questions. In the case of niche and specialist product areas “it is even more important to consult users when involved since this is a field of less experience for product management”.

Commitment The final lesson in the area is arguably the most important and relates to how important it is to have full commitment from top management and the organisation as a whole. The lesson stated “It has been difficult to work efficiently not having full commitment from top management, there is a lack of information on project progress out into the organisation. The project has a vague driver which is the strong force that provides motivation for the work to be done”. The second part of this lesson was that “the business situation has been frequently questioned, as the project has not been initiated from product management, but from upper management. It should have been easier to increase the motivation and get resources if the driving support was stronger”. This responsibility falls within the role of the project sponsor as he or she should promote the project to the organisation as a whole and alongside the project manager pushing the project along and keeping the team motivated.

12.2.3 Manager Sponsor Relationship

The lessons collected below are directly related to the interaction between project managers and project sponsors.

Role-definition It is noted that it is important that the different roles in the project are very clear. Especially the case when someone is less familiar with the Elekta project model and who makes the decisions.

Project-Kickoff Clear goal and priority by product managers are essential for team motivation.
Clear-Expectations  A project manager must be clear to sponsor in what can be delivered and achieved. The steering group was noted to be a good forum for information and decisions regarding project progress and problems. Project sponsor participation at each meeting is not necessary but at least every second meeting was recommendation to be attended. A clear goal and priority by product managers are essential for team motivation. Openness at meetings improves engagement. Weekly meetings scheduled for an hour a week are very beneficial to get the whole team together for a discussion on future plans or activities.

Issue-Resolution  Personal face to face meetings rather than over the phone are noted to be much better for conflict or issue resolution. Many short meetings rather than few long meetings is more beneficial.
Part VI. Benchmarking

13 Introduction

This section includes the empirical data collected from the companies chosen as benchmarks against Elekta and the established theory. Similar information on the perspectives of each role and responsibilities, expectations of the opposite person, relational challenges, lessons learned and project success is included for both Nilfisk and Sectra who were interviewed. This information is presented in the same format as that in the Elekta section for ease of comparison between sections as well as its summation in the analysis section.

14 Nilfisk

14.1 Introduction

Nilfisk Advance has its headquarters based in Denmark with production facilities located in Asia, Europe and Americas and sales companies around the world. Main product lines are professional scrubber dryers, sweepers, vacuum cleaners, and high pressure washers. Products are primarily focused on the commercial cleaning market, which includes institutional and industrial customers, as well as professional contract cleaners. In the domestic market, vacuum cleaners and high pressure washers are sold under the Nilfisk brand. Nilfisk Advance has developed professional cleaning equipment for more than 100 years.

The project organisational structure is slightly different to traditional structures and the role of project manager is held by the Nilfisk Advance Program Manager (NAPD). The role of which is likened by NAPD leaders to be similar to running a small company since it includes both business and project management. The NAPD is the top position within Nilfisk projects and is more of a ‘Project Chief’ since he or she manages a number of sub-project managers including Marketing, Technical, Quality, Logistics, Sourcing, Engineering PM (develops manufacturing processes and equipment). The project sponsor role is therefore encapsulated by the marketing manager within the project.

One NAPD and one marketing manager were interviewed and their perceptions and opinions are presented below.

14.2 Role and Responsibilities

14.2.1 Project Manager

Fundamentally, the NAPD is responsible for planning and executing the project. He or she must justify the benefits of the project and show that the cost price versus sale price makes it a viable project. This needs market support and evidence from the product manager, who acts in the more traditional sponsor role. Getting valid and reliable market information can be difficult in general and therefore Nilfisk also employs the use of a marketing intelligence manager to analyse the market and determine true market size especially prospective market share. The sponsor adds information on this process from a product perspective. Ultimately the NAPD must ensure the work done in the area of marketing is sufficient to execute the project.

The NAPD leader is then responsible for setting and monitoring the project budget. He or she must also be an adviser and coach for the sub-project managers and deal with any conflicts and facilitate the interface between each of them.

Once the project is underway he or she must report and explain to steering committee project status which includes promoting the project internally ensuring there is company confidence in the project. Everything within the project rests on the shoulders of the NAPD. Furthermore, he or she is accountable for sales after the product launch relating back to the initial marketing information supplied at project commencement.
14.2.2 Project Sponsor

The role of project sponsor is held by a product manager. He or she is expected to have contact with the local regional product managers within the sales organisation. They should know the positioning of each product as well as where the competitors are within the same markets. The sponsor should use their knowledge to put together a product concept and present the idea to the company. They should then initiate the project once it has been approved and take on the role of a customer to ensure the product fulfills the market requirement and the sales organisation buys in to the project ensuring this will be a product that they can sell.

The sponsor should maintain close contact with product line managers responsible for the engineers working within a specific platform to understand how the product is being realised. This is backed up with close contact with the intended project leader. From the start to the end of the project the sponsor must ensure the product is the right product and meets the correct positioning in the market and therefore its introduction will have a net positive effect on the company in regards to other available products. From the role as a sponsor back to a product manager, he or she should follow the product from the very beginning until it is phased out.

14.3 Required Competencies and Traits

14.3.1 Project Manager

The NAPD must have leadership qualities especially motivating people to excel. They must have a technical background and understand the technology being developed however this alone is not enough as an NAPD. They must also have a good business and market sense where knowledge on quality and logistics is beneficial although not essential. This characteristics are well suited to an engineer working as a project manager or a project leader in a more commercial environment with technical experience. Ultimately there should be a good balance between their commercial skill set and technical knowledge.

14.3.2 Project Sponsor

A sponsor should be able to cope with a lot of information from a variety of sources such as end users, customers, and the sales organisation. They must be able to manage and analyse this information in creating new product ideas. This will include information on market input, quality claims, a push to increase sales, a push from research and development with technical issues especially where new solutions must be found.

Therefore the sponsor should be an analyst and be able to find feasible compromises between customer needs and product functionality. A sponsor should also be flexible and expected different work loads through the different stages of the project and adapt to them. Lastly, the sponsor must be focused and organised in their product strategy. One product can not solve all the requirements and therefore a sponsor must ensure a specific specifications are built around a product or product platform to be targeted at a specific area. This must be adaptable to some changes especially from competitors pushing down price or introducing new technology.

14.4 Project manager expectations of project sponsors

Initially the sponsor is expected to define customer needs and come up with a requirements specification around which the product is to be based. This should typically involve research and data collection to find what type of product is needed by the market. The sponsor should ensure that his or her idea is aligned with the overall portfolio strategy of the company by confirming so with the senior product manager or other members of senior management. He or she must be more of a team member and it is uncommon to be a steering group speaking partner unless issues presented are directly related to marketing issues. The sponsor role is a more traditional one until the end of the first tollgate meeting at which time the product should be well designed. Finally, the sponsor is expected to have prepared required marketing launch materials and a marketing plan for the new product. It must be noted
though that a product manager or sponsor is not essential as the NAPD is expected to have skills in market analysis

14.4.1 What makes a good sponsor

Good sponsors have strong customer knowledge and often need to know more than the customer since the customers often do not know what they need or will need in the future. The sponsor should be able to analyse their application of current products in determining future needs. This information is stronger than that given by sales since a sales perspective is more focused on the lacking features held by a competitor. The sponsor should have a good understanding of market size and company potential within the market. The sponsor should be focused on main product functionality not specifics that can be determined during design phase. The sponsor should be active within the project especially after the project pre-study where project specifications have been set down, the sponsor should be active through prototyping and offers advice on product design. The sponsors product management role should be exploited to maintain market contact especially with sales companies to ensure they know the product road map.

14.5 Project sponsor expectations of project managers

The project manager should control the specifications of the project according to the market requirements specified by the project sponsor. It is then up to the project manager to ensure the product then fulfills the specifications set out. The project manager should review concepts that lead to decisions to be made that affect design, product specifications, and quality. These should include the sponsor or at the very least inform the sponsor. The project manager should ensure there are weekly meetings between the project manager and sponsor at least at the beginning on the project in which revise of task lists and time plans can take place. This contact should be supplemented by many informal meetings throughout the project. The sponsor also expects the project manager to secure the resources required for the project from the required people such as research and development or personnel from a factory for input on production.

14.5.1 What makes a good project manager

A good project manager reports effectively to the sponsor where the sponsor is in the role of a customer. The project manager should ensure the sponsor feels confident that the product will work and can be sold. A good project manager should not just reuse existing solutions and should be able to improve and challenge these so the product has new and innovative features. The manager must keep the project on track and compare the current solution against the original market specifications from the project sponsor. This is facilitated by a close dialogue between project sponsor and manager. A good project manager also has some interaction with the market and ensures that they fully understand the market they are developing for.

14.6 Project Manager-Sponsor Relationship

Without the sponsor research and development could still design a great product, through a project led by a project manager, but with the risk that there is no market share to be had by it.

14.6.1 Project Manager Challenges

Some of the relational challenges described were a lack of true market understanding. A lack of understanding of the process of manufacturing a product related to additional or specific product requirements or an improbable product release date being specified. Also, availability in terms of sponsors time can be an issue at different stages on the project. This is related to the fact that product management has many products to cover not just the product in the current project. And the final challenge discussed was in regards developing a new strategy for the future, especially important in during product conception. This was a challenge as at times this was lacking or insufficient.
14.6.2 Sponsor Challenges

Challenges experienced by the project sponsor are that specific solutions are sometimes chosen, by the project manager, to meet time and cost plans over meeting competitiveness and customer requirements. This is at times due to cost saving pressures of 5% each year which is important but should not be at the expense of key specifications valued by the customer.

Flexibility can also sometimes be lacking through a project as sometimes an initial product target area or product objective needs to be changed during the project. Then it is up to the project manager and sponsor to challenge this especially when a replacement product does not have the same functionality as its predecessor. In this case it is necessary to challenge product goals to ensure the product is still well received by the market. A project manager must have market awareness and not just a technical focus on saving costs and meeting schedule. It may be better to postpone a project to better understand and meet customer requirements.

A project manager is sometimes unaware of or unsympathetic to a sponsor's product management commitments outside of a project and issues can occur when decisions are made without consulting the sponsor. The project sponsor's time can be scarce at different times during the project and this should be understood and dealt with effectively. If it isn't the project runs the risk of diverging in the name of keeping the project moving forward albeit without the input from the sponsor. The sponsor must prioritise his or her work and push to get involved to understand small details at time to ensure the project stays on track.

14.6.3 Ideally

The ideal relationship between project manager and sponsor was said to be one where the project manager and sponsor always work closely together through a project. They must understand each other as they are the main drivers for the project. They should both know the required positioning in the market for the product and share a vision as to how to get it there. They must communicate well or the project could be delayed or confusion could be created as to actual objectives. This will promote a straight line from start to end rather than a zig-zag as project direction is changed.

14.7 Lessons Learned

More than just through interviews, information on this process was also gathered through listening to an after action project review meetings held at Nilsk. There is a lessons learned process that the sponsor is generally not involved in and the responsibility rests with the project manager. One of the most important factors of this process was that each major lesson highlighted was assigned an action item with a person responsible for its implementation into the Nilsk project process. This was a common procedure and the action list was written up directly after the meeting, it was noted that there is no one responsible in following up the action list however this was not seen to be a big issue. It is perceived as a good tool to help knowledge sharing within the company and generally the process is seen to work well. It was further noted that learning from mistakes is a positive process to improve documenting and specification processes generic within projects. Lessons learned can generally be applied to two main areas, the first being within the NAPD process where process streams can be updated so that the systematic process improves each time. Secondly, since capture takes place at the end of a project some lessons are forgotten or the process is rushed since the next big project has started and is demanding time.

There could however be room for improvement in terms of highlighting issues after the final tollgate, which is six months to one year after the initial release. Since that is a while after the product is released to the market, project activities have stopped and people must then go back to remember lessons learned.
14.8 Steering Group

Project status update meetings are often held once a week with a larger one once a month. The same steering group exists for all projects and they are reported to at tollgates. The steering group consists of the general managers for research and development, marketing, production and the CEO of the product company who is in charge of production and development of products. Generally every second month or as required a tollgate meeting will take place with the steering group.

The project manager must present and establish a level of comfort within the company and staff that the project is going well.

This is generally done alone or with the team however the actual presentation is usually just the performed by the project manager or with the help of one other person at the request of the project manager. For example a technical project manager to discuss a major technical issue. This presentation has a template format which is to be filled out and has many categories where each sub-project manager is responsible for their relevant section. For example the sourcing or procurement section of the status update is handled by the sourcing manager. It has been found to be effective to share and hand over ownership, responsibility and therefore accountability of each section to each manager. The main three or four tollgates in the process take a lot of preparation time (T0, T3 and T7). Passing tollgates is done by following power point templates as part of this reporting process and in doing so prove that the tollgate has been met. It is up to the steering group to ask critical questions to determine project status since they must then release resources for the next stage of a project. They are involved in three of the tollgates only which are Project Initiation, Contract, dealing with project costs, product costs and where the business case is fixed and lastly Sales Release where it is demonstrated that the contract has been fulfilled.

Project status presentations are supplemented by monthly status meetings to the research and development manager on financial project status, market status, position of the project at the moment and to discuss current or upcoming issues or problems and also any requirements or support needed in the next month. Often, but not always the project manager and sponsor (product manager) will present to the steering group outside at these meetings. Presented are the business case, overall project status, investments and costs thus far, deviations from plan and current quality targets.

14.9 Project Success

14.9.1 Project Manager

Nilfisk using a KPI system to measure project success both during and at the end of the project in the areas of current expected product cost or Standard Unit Cost (SUC), project timeline or project duration, project cost (Investment and man hours), number of variants, Net Present Value (NPV) where project pay-back is after 5 years (3 years for consumer products) and the CC5 effect if a replacement product. Product reliability and product quality once in the market including units sold are not considered separately measured and are not part of the project KPIs. Six months to a year later overall data is gathered and analysed in the those areas of product cost, quality of product and a market survey is performed to determine these and given to statistic company to summarise. CC5 is calculated as the saving in percent of product cost on new models that has a corresponding replacement model. The saving is calculated as an average across all replaced models based on the sales volume of the existing models. This means that a volume split change to new project is taken out of the equation.

Project success can then be assumed when all targets are met. It was also noted that the NAPD must come back in between gate seven and eight if things did not go well and find out why, especially how to prevent it in the future.

14.9.2 Project Sponsor

Ultimate project success in the sponsors perspective is “When we sell to target”. This is when sales figures are as expected or better with minimal negative quality and market feedback. This can be
measured by target cost and accepted sales values. It was noted that meeting the project deadline is important (more so in some cases), but more important is to reach the right solution at the right quality. Also, it is very important in promoting this success to ensure that the product specifications are well communicated to the market so that the sales organisation can guide the customers to the right product. Financially the project is closed when the product is released at tollgate seven but responsibility still rests with the project manager to monitor customer satisfaction. Claims can come back to the sponsor in regards to whether or not the product is fulfilling the needs of the customer.

Finally, at sales release only field tests have been completed and it is also likely that some key customers have used the product as well. This is a good initial measure of success that the product is meeting their requirements. Without this, a critical issue within the project may not be highlighted and the sales release tollgate will not be met.
15 Sectra

15.1 Introduction

Sectra’s core business is delivering top-of-the-line, high-availability, robust enterprise diagnostic imaging for 24/7 operation. The product offering includes systems for film-free radiology, mammography and orthopaedics. The product model used consists of five project tollgates. Generally one major project is run with two or three smaller ones at any time in the Stockholm office. Project managers manage one project at a time while project sponsors can sponsor one or two projects at a time.

In terms of project organisational structure, Sectra has a fixed strategic product council that controls the portfolio and makes the tollgate decisions. This includes general managers from product management, research and development, operations, the overall Vice-President, and the project coordinator as head of the new project office to develop Sectra’s project managers. The steering committee, which varies between projects, coaches the project manager and interprets and approves the project specifications.

The steering committee could be used to make tollgate decisions as well but then it could be a different group for each project making decisions on scope changes affecting resources, therefore the steering committee does not make these decisions. The steering committee is three to five people and includes a senior person from research and development to coach the manager and bring experience from previous projects, someone from product management, operations, after market service and support or production. Each tollgate has a required presentation as an input to passing it which is not yet a template. The business case has a template to be applied to all projects and uses a spreadsheet structure. In regards to the roles and responsibilities of project managers and sponsor the project process model guides and defines what the project manager and sponsor are responsible for. The process itself defines what is expected from the project manager and sponsor in terms of the content and frequency of reporting.

15.2 Roles and Responsibilities

15.2.1 Project Manager

The project manager is responsible for planning and executing the project. He or she will receive the assignment specification from the sponsor and turn that into a project definition or specification with a time plan and a budget. At the same time the project manager should put together a concept design to make is clearer what is trying to be done, this is useful to ensure the project specifications are correct and will meet the business case. Following this they should secure the resources required for the project from program managers responsible for coordinating all resources within the research and development department. Resources are structured in the areas of technology development, product development and product maintenance. From the project managers perspective, running the project is similar to a company, being the manager is like being the general managed whereas the sponsor is similar to a board.

15.2.2 Project Sponsor

The sponsors fundamental role within the project is writing customer or market specifications and guiding the project to ensure it is moving in the right direction. The role varies slightly between projects and the corresponding project manager especially between senior and junior project managers. A senior manager can be given scope and boundary conditions and can be relied on to deliver those with less guidance and support. However, more coaching or guiding junior project managers is often required. There is a gated development model used by Sectra. During the Inception phase the sponsor is required to hand over specifications that cover project goals and deliverables to be interpreted and transformed into project goals by the project manager. These will include the project time line, budget, a high level view of how to solve the task (project) and these must be able to lead to a project plan.
Following this, weekly or biweekly meetings are held to check status where part of the sponsors role is to identify main project risks as well as what can be done by the steering committee to help the implementation of the project goals.

15.3 Project manager expectations of project sponsors

A project sponsor must make the assignment of the project clear and make sure that he understands and agrees with project specifications. The project manager expects the sponsor throughout the project to update the business case including market size and estimated sales volumes given the status of the project and market development. It is expected that the sponsor has the required authority and availability to make informed and quick decisions. If problems with the time plan arise, resources or a technical problem then the scope may need to be changed and the sponsor is expected to approve this. The sponsor should be able to make rapid decisions and have credibility through the appropriate qualifications for the job. The sponsor is expected to be involved directly with the team especially when there are questions relating to the functionality of the product.

15.3.1 What makes a good sponsor

A good sponsor ensures that the project manager is always working with the agreed project specifications. In regards to changing the scope, the project manager needs the sponsor once there is a problem and the project needs to go outside of the initial boundaries, ie need more resources or time due to technical problems. A good sponsor should act quickly.

A good sponsor should be a part of a project’s frequent meetings such as the biweekly steering group meetings and the strategic product council meetings as well.

15.4 Project sponsor expectations of project managers

A project manager is expected to stay on top of the scope and deliverables. The project manager should ensure the project is moving according to the time plan. He or she should monitor project budget including budget accuracy however tracking of the research and development budget is done by the research and development manager.

The project manager must always been in control of the three cornerstones of the project, time, quality and cost, and that the project stays within the acceptable margins of error. Initially the margins will be larger but as project progresses risk should be minimised and therefore smaller margins of error are accepted. This applies to both junior and senior managers. It was noted that it is important not to push a junior project manager too hard to finish something faster and faster as a plan could be developed that is unlikely to be implementable or at additional cost or lower quality.

The project manager is expected to communicate frequently with the sponsor so both people know exactly what is happening in the project. A good example of this is during project initiation where both the project manager and the sponsor know the scope of a project is too large, the two know there is a deadline, and both must be aware of the possible limitations that could be put on the project to still meet the deadline.

15.4.1 What makes a good project manager

A good project manager should know everything about the business case of the project and the documents and presentations that exist as part of the role of the project sponsor. This starts early in the project where the project manager and the team really need to understand project goals and what needs to be achieved. Day by day decisions all add up to make a difference, a good manager and team understands the implications of deviating from the initial project plan ie. They realise the time line won’t be met and must then decide what to do. For example, a good team and manager knows time to market is especially key and will approach the steering committee with a solution of cutting away
part of the project to stay on plan.

A good project manager is energetic and puts a lot of effort into the project, in a sense he or she “feeds the project with energy”. He or she should be quite charismatic in order to get the team enthusiastic and excited about the project. This is especially important in regards to continuously selling the project to the team and “making it fun and interesting to work on”.

The project manager should be good at project tracking, possess good project administration skills and therefore always follow up on what is happening within the project. More than project tracking though the manager must navigate the project well they should be aware of future risks and events that are coming up ahead. This was analogised as controlling the project like a car by doing more than just looking in the rear view mirror at the “burn-rate of the project” or percentage of the budget consumed. A good project manager should pay attention to current details and be proactive enough to look ahead six months also ensuring the team always keeps the future in mind.

15.5 Project Manager-Sponsor Relationship

15.5.1 Challenges faced by Project Managers

The project sponsor wants to get the most out of the project and is tempted to always squeeze in more features, increasing scope, into a running project. If this is the decision then the implications of it must be shown by the project manager. There can also be issues if a sponsor does not take a decision quickly enough. For example, if something needs to be investigated for a certain amount of time then that decision must be made and the team and project manager should feel confident in it being the right decision. Availability of a sponsor is critical but has not been a big issue. If there are problems with availability the project manager runs into difficulties. Resource coordination is sometimes a challenge when resources are being shared by multiple projects thereby causing bottlenecks with the company. To avoid project delays the time line or scope may need to be changed, availability at these times is the most critical but not really a big issue at Sectra.

15.5.2 Challenges faced by Project Sponsors

One of the main challenges notes was a project falling behind schedule and the sponsor is a part of the steering committee. The project manager should present required changes to the sponsor with the corresponding implications. Sometimes the project sponsor feels that his or her availability is an issue especially when their product management role requires travelling during a project.

There is a big difference depending of the experience of the project manager. Sometimes a challenging are junior project managers and a lack of confidence to be strong in front of the project team. If this is the case it may be difficult to steer and stay in control of the project. This person then needs additional guidance from the sponsor and the steering committee. Junior managers need guidance and if they are simply given the scope and boundary conditions of a project there is a higher chance that issues will occur and the project will not be delivered as expected.

15.5.3 Ideally

Both the project manager and sponsor have the required abilities for the role. Especially important in this is that both people understand the relationship between the business case and the project. This is facilitated by regular interaction between the project manager and sponsor. The sponsor makes quick, smart decisions and discusses with the stakeholders involved from the CEO to the different line managers. Both people are well organised and have good planning and execution skills. A softer issue is that the relationship is friendly and easy-going which is part of being open so that nothing is obscured or kept from either person at any time, applicable when an issue comes up and the person tries to solve it on their own. The right level of communication and detail should be passed over so that each person can help and offer guidance without assuming parts of the role of the other person.
A lot of this can be achieved through informal interaction where both people are talking almost daily throughout a project.

15.6 Lessons Learned

There is no formal storage of lessons into a database. A final report is written at the end of each project containing lessons learned. Especially important is that a quality audit is carried out by an independent person looking at the project and interviewing the team and managers and then documents that in a report presented to the strategic project council. This includes updates on time lines and budgets. This highlights issues that have been running well and highlights areas for improvement. The areas for improvement are captured in the Corrective Action Preventative Action database (CAPA). Issues identified during a quality audit that need to be improved or corrected end up in the CAPA database. They cannot be removed until they are fixed. Quality assurance audits during the project, typically at tollgates also capture these issues. The final report of a project can also contain items or processes that could be improved and can also end up in the CAPA database. CAPA is Sectra’s program for continuous improvements mandatory for some processes to meet regulations from the Food and Drug Administration (FDA) and optional for other continuous improvements.

It is mandatory to look at similar projects within the same field and look at the lessons learned there that could be applied to the new project. The project process says that project managers should review lessons learned before starting a new project and these ideas are then captured within the project specifications where steps taken to avoid previous problem issues should be shown. It was noted that the reports can be lengthy thereby reducing readability but overall the process works well.

There is also a business case follow up over time performed by the product council, however it was noted that Sectra is a younger company so some of this is still developing.

15.6.1 Steering Group

Reporting occurs sometimes at weekly or biweekly meetings. The steering group is presented to by both the project manager and the sponsor. The product council is presented to at each tollgate or as needed. If major changes are required then a meeting is needed before a tollgate. As mentioned before the strategic product council decides what projects to do within the company given the available resources so that the best project are chosen. The sponsor can be a part of both the steering group and the product council, this generally happens for the largest projects, therefore the relationship between manager and sponsor is the same as the manager and steering group. When presenting the sponsor is part of the steering group and therefore the manager presents to him or her. The steering group is generally only for support, the level of which varies depending on the seniority or experience of the project manager. In some ways the steering group or product council is developing in its purposes at Sectra and the need for both the steering committee and product council is in question. Regardless though, it was noted that the steering committee makes the project manager’s life easier by having a formal forum to discuss all aspects of the project.

The sponsor should have enough knowledge to present to the steering group including meetings where tollgate completion must be proved. The main difference is that the project manager presents a more elaborate status report to the steering group than to the product council, but again noted that there is a unique situation due to the seniority of the project manager and the project sponsor interviewed since the sponsor if a part of the project and both these groups. Furthermore, the project manager is an experienced manager and the same may not apply to junior or newer managers at Sectra.
15.7 Project Success

15.7.1 Project manager

Sectra uses a balanced scorecard which measures how timely each tollgate is delivered. Also measured is budget accuracy for the current and next tollgate. This includes measures as to how accurate the estimations should be at tollgate zero compared to tollgate two. It measures whether or not the product is delivered as expected. However, this is more easily measured two years after project completion. It measures whether the project is on time, or if delayed, then delayed within an acceptable margin. Similarly, it measures if the project is on budget, or if over budget, then over within an acceptable margin.

The project manager also considers project success with softer issues such as that the team members enjoyed the project and feel they have personally progressed. This was something noted to be very beneficial in subsequent projects.

15.7.2 Project sponsor

Project success can be assumed once it has been validated that the project fulfils the requirements of the customer and also that enough units of the product have been produced to ensure it is reproducible. This can take time especially in regards to knowing that customer requirements are being met and getting data to validate product, a challenge especially in the medical equipment market. Part of the final project report is collection of input from the stakeholders on their perception of the project however a more formal follow up especially of the business case is being developed but does not yet exist. It is important to know about the outcomes of previous projects to apply knowledge to new projects. A twelve month follow up of the initial business case is a planned review and evaluation to take place in the next project. Break even time is however measured throughout the project and is tracked as the project develops - the accuracy of which should improve correspondingly.
Part VII. Discussion and Recommendations

16 Introduction

Once the capture of information used in this report was completed, the challenge was to sort and analyse it. Firstly, each company was described individually in their relevant section of this report. Following this, the views and opinions presented were sorted into the same tables presented in the theory section of this report. These final tables are found in appendix D. The opinion and perspective of each company was then easily compared to each other as well as the theory. The tables as well as each company description formed the basis of the analysis and discussion section. Comparing the perspectives of each company was important in understanding the major issues and problems faced by project managers and sponsors in the relevant sections identified in the literature study. The major points highlighted in the interviews are what make up the sub-sections of this analysis and discussion section. The analysis and discussion of this information was separated into the same major headings used in the theory section of this report, giving the same flow to the theory, individual companies and analysis and discussion sections. These major headings are Roles and Responsibilities, Expectations, Relationship Issues and Factors, Lessons Learned and finally Measuring Success.

Expectation of the opposite person and measuring success were initially not researched but their analysis was included after heavy discussion in the interview process and the emphasis placed on them by project managers and sponsors. The Expectations section must be especially noted here as there was very little literature found in this area and more importantly they are both similar but also somewhat unique to each person. As an extra note, where relevant the page number in the appendix tables has been included in brackets for ease of reference between the information contained here and that within the tables.

17 Roles and Responsibilities

The issues below have been identified as the most critical points to a project manager-sponsor successful relationship. The issues below also include areas of differences that are evident between companies and in Elekta’s case differences of opinion within Elekta. In some cases ideas not initially a part of this thesis are explored as they were identified as significant issues. Recommendations are highlighted in text boxes below with each one below the discussion and description of the concept to which they relate. In the case of the recommended action boxes, they are ranked and coloured from the least significant course of action at 1 to the most significant and darkest course of action as 6.

Across all the companies interviewed there is a consensus regarding a project manager’s ultimate responsibility and accountability for project success, this was not disputed by any of the sources analysed.

17.1 Business case knowledge and awareness

There were some differences in regards to a project manager’s knowledge and accountability of the business case within a project (page 88). Sectra’s opinion was determined mainly because of the relatively smaller size of the company. At Sectra the project manager had strong knowledge of the business case and the position in the market into which the product fitted. Nilfisk’s, a relatively much larger company had a similar view but for different reasons. Nilfisk’s project organisational structure was different in that the project Manager or NAPD had complete responsibility of the project and product produced, including verifying the market information relied upon in considering a project’s viability. Therefore it is very much in their interest to have a market understanding and confidence in the business case.

At Elekta the responses varied but generally the consensus was that the project manager should have good knowledge of the business case and the more, the better. Understanding the business case, but not being accountable, puts the project manager in a better position to envision a final product and its critical functionality to a customer. Having this information presented and available makes the
working relationship between project manager and sponsor much easier as well increases the likelihood of the final product being profitable.

**High market contact for the project manager and a strong understanding of business objectives.**

### 17.2 Customer requirements to project objectives

The role of creating a clear description of project objectives for the project team is interlinked to the role of the project sponsor to provide clear customer specifications to the project manager (page 88). In Nilfisk's case the information once passed to the project manager is their responsibility and project goals must be created from it. Similarly, the quality of this information was discussed with high importance at Sectra.

At Elekta, it was mentioned that often the initial quality of this information was found to be lacking and is a likely contributing factor to the strong need of project sponsor involvement. It was found through the interviews that often the customer requirements were too loose to define strict project and/or product requirements. Although this will never be perfect there was room for improvement in this area. The need for the project sponsor to clearly define these and hand them over in a timely fashion to the project manager cannot be underestimated. If not done so effectively, this will increase time needed from the sponsor in the project. Furthermore, clear specifications means well defined project goals and ultimately a successful product with appropriate functionality.

**Use reference user groups in all projects. This will decrease initial pressure placed on customer requirements documentation and give the project team a better understanding of the functionality required by customers from the customers.**

### 17.3 Adaptive application of each persons role

The role of a project sponsor to support a project was identified by project managers and sponsors at all the companies interviewed (page 99). However, there were some negative perceptions from project managers in regards to wanting more project support, especially within Elekta. At Nilfisk the idea of a partnership between project manager and sponsor is not as evident as the project manager holds total project responsibility and the product manager or sponsor is very much identified as a team player. At Sectra the situation is again the same but for different reasons since the project sponsor is generally on the steering committee as well as within the portfolio management committee and therefore is less likely to present to the company or these groups on behalf of the project.

The role at Elekta has very much evolved from where a product manager simply handed over specifications, to its current form where in most cases a project manager expects a sponsor to be a team player as well as a speaking partner. This mean being a part of the identity of a project. This is most important at times when a project is slipping and falling behind schedule or when big changes need to be made to project scope that affect resource allocation, cost and project completion date. It was at these times that it was identified that a project sponsor is most important and should in some way “defend” a project alongside the project manager (page 99). The project sponsor should wherever possible remove obstacles for the project manager and the project team. This alliance filters down throughout the company and when effectively executed greatly increases the likelihood for a project to satisfy it’s specified time line.

**Clearly defined role requirements are essential but should be applied flexibly. However, applied only in conjunction with a high awareness of the individual project sponsor or manager that each person is working with.**
17.4 Scope changes

The project sponsor should provide an open line of communication between him or herself and the project manager (page 94). This was a point of discussion in every interview and its importance cannot be stressed enough. A project manager should facilitate the development of an impact analysis for change requests regarding the scope of a project. This was another point that was emphasised and discussed by the project managers at all the companies interviewed.

The inclination it seems is for product management to push for as much functionality as possible within a product. This needs to be countered by project management with the clear consequences of those making changes (page 95). This is done quite well generally, however when it is not handled well the net result is a delayed project. It is a strong source for tension between project managers and project sponsors and should be dealt with professionally and effectively at all times to mitigate any negative effects on project outcomes.

Scope changes should always be met with an open mind and a critical discussion on their consequences. Direct refusals and surprising, significant and enforced required changes should be avoided.

17.5 Sponsor Availability

The following is related to the issue of project sponsor availability that was identified at times as being an issue by project managers at Elekta more than those at Nilfisk or Sectra. This issue is generally due to the commitments of a project sponsor outside of their sponsorship role (page 98). This is a direct relational aspect between the two people and was found to have the largest effect on project results and end effect. Each numbered description is linked to a possible course of action that could be taken to remedy this problem. These may be employed alone or in conjunction with each other.

1. Many companies run on a one project per project manager at a time. This same could be applied to sponsors. There was a differing view here as some project managers suggested large projects may need two sponsors assigned to them while project sponsors felt one major project or two smaller projects at a time was appropriate.

2. A secondary cause may be that the product management group within a company is too understaffed to have a strong operational role. This varies between project managers and project sponsors and ultimately both parties should be flexible within each project. A recommendation coming out of the interview process was to list and evaluate current product manager priorities and see what, if any, could be passed to someone else.

3. In order to ease some of the pressure on product managers to provide continuous support and market information, product managers should use their network of market contacts to form and facilitate the creation of reference user groups. The groups can meet with the project manager and the team throughout the project as required and answer questions on product functionality, take part in demonstrations or physically test the product themselves. This recommendation is two fold in that it also reduces the need for near perfect customer requirements to be perfectly formulated the first time by product management as discussed in section 17.2.

4. Another possible and more significant solution to support project sponsor availability is to hire more product managers to support those currently employed. More than one product manager could also be assigned to support a project assuming it is within their product lines.

   (a) When there are too few product managers there can be an issue since a single product manager may have two or more active projects running within their product area and should support both. Ideally the opposite case should occur within a company.

5. If product managers have high work load, perhaps product managers could be a part of the product team and a separate person in the role of project sponsor can be allocated. This person would support the project through securing resources and supporting the project manager
individually. In this way project management and project sponsorship would be more separate roles within the project which may be beneficial. Product management can focus on customer contacts and sponsoring projects and perhaps less time on installation and after sales support. This was a suggested recommendation from the interview process however it was not supported by all interviewees asked about it.

6. The role of project manager is evolving as project managers are getting more experience or knowledge in regards to the clinical applications of a product. It was mentioned that this is not a sensitive issue and project sponsors should feel that this takes a load off their shoulders. The intention is not to suggest that sponsors do not need to be as present in the project, “we still need them in the projects”.

(a) This is directly related to lack of product management time
(b) Less time is being spent on follow up of specific project details and therefore the use of sub-project managers may need to be employed depending on project size.
(c) There is good and valuable experience to be gained for a project manager by visiting sites and learning more about the clinical side of the product. This will help to better execute the project and produce a product closer to customer requirements.
(d) This is becoming a trend that project managers are also taking on more of product management role through market knowledge. Although, it was clearly stated in the interviews that the role of product manager is still very necessary.
(e) Importantly, it was noted that the ultimate direction of this evolution is unsure and needs to be further explored in regards to the shift in project accountability especially on decisions made on scope changes.

**Recommended Action**

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<table>
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<tbody>
<tr>
<td>1</td>
<td>One project at a time for sponsors.</td>
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<tr>
<td>2</td>
<td>Efficient organisational processes within product management.</td>
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<tr>
<td>3</td>
<td>Employ the [mandatory] use of expert user groups to all projects.</td>
</tr>
<tr>
<td>4</td>
<td>Hire or assign more project sponsors to projects.</td>
</tr>
<tr>
<td>5</td>
<td>Separate the product management role and hire application engineers for sales support, training, installations.</td>
</tr>
<tr>
<td>6</td>
<td>Evolve the role of project manager.</td>
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**Tab. 9:** Graded Sponsor Availability Action List

18 Expectations

Elekta in the past was run in the style where the project sponsor was a customer and the project manager must deliver according to the product request presented to him or her. This has very much evolved since then and now the two people are expected to develop, work through, monitor and finalise the requirements together. One of the most emphasised expectations of project sponsors throughout the interviews was the need for project support. Although the role is evolving somewhat as discussed previously, it is still believed that the project manager cannot do the project without the sponsors support. The general view is that without a sponsor the project should be terminated.
18.1 Project Support
The need for a cohesive project manager and project sponsor team was also emphasised. This relates to the need for the sponsor and manager to always present an allied view or communicate otherwise before important meetings (page 97). It was said to be most critical that the project sponsor supports the team and project manager especially when the project is slipping. The project needs to be supported and defended to others as to why its late. This might be due to design difficulties, project delays or scope changes. This expectation of a project sponsor is related to their perceived role as presented above in section 17.3.

A project manager and sponsor must feel the project is their own, like parents to a child. It must be supported it when it needs additional work or resources and defended cohesively if it begins to slip.

18.2 Decision making
The need for quick and reasoned decision making was another emphasised point across all interviews (page 109). Sectra’s project manager specifically mentioned and reinforced the importance of having a project sponsor that was well aware of his or her required knowledge and responsibility. Nilfisk was somewhat different in that the decisions where possible were made by the project manager. Elekta gave a mixture of responses based on the person each project manager had worked with. The different project sponsor personalities meant that some project managers got fast and effective decisions quickly while others struggled at times. All companies noted the need to turn to the steering committee when the decision’s consequences had a significant impact on time or resource requirements.

Sponsors must be “daring” to make some decisions without taking the time to go to the steering committee, which can cause project delay. Equally project managers should only turn to a sponsor when a decision is outside their authority.

18.3 Project Steering Group
18.3.1 Sponsor Project Knowledge
It was clear through the interviews and in the theory that it is in the role of the project manager to present the status of a project to the steering committee (page 99 and 96). An idea that came out early in the interview process and was asked as part of the semi-structured nature in subsequent interviews was the capability of a project sponsor to present on behalf of the project. This was an idea not present in the theory.

At Nilfisk, this was said to be quite unlikely as the NAPD or project manager would prefer to ask one of the other sub-project managers and would not expect the product manager within the project to have the knowledge to present without significant coaching beforehand. Sectra was different again due to its relatively smaller size and that the project manager was often presenting to the project sponsor as part of the steering group. Regardless of this fact though it was noted that the sponsor should have at least enough knowledge as the steering group and therefore should be able to present with some notice.

Elekta’s perspective was generally that it would be good if the sponsor could take over from a project manager at steering group meetings but it is not necessary and varies between project sponsors depending on their level of involvement in a project. The general consensus was the it could be a good test of a project sponsor’s interest and involvement in a project to see if they could present to the steering group, a positive expectation held by project managers.

A sponsor must show interest and be strongly involved in the project they sponsor. They should have the knowledge to be able to present to the steering committee in most project areas on behalf of the project.
18.3.2 General Process

Nilfisk has a fixed process that seems to work well for them while Sectra is still evolving their steering group process. The issue there is to determine the need for both a steering committee and a strategic product council although this may continue to develop for some time as the company continues to grow.

At Elekta, a tollgate decision has always been prepared in advance by a project review in a timely fashion before the actual steering group meeting. A much more limited group of people are invited, such as the managers from research and development, product management, service, management engineering and quality assurance. The recommendation from this meeting is often the actual decision but unexpected opinions may be raised at the steering group meeting from people not directly involved and with limited insight into the project. This, along with lack of sponsor knowledge prior to a steering group meeting was found to complicate issues and cause unwanted and tangential discussions at the steering group meeting.

This is a point also reflected in the interview from Wenell Management where appropriate issues and discussions should take place at these meetings due to the seniority and cost of time of those present. An alternative solution could be that the review group gathered the week before was the actual steering group for this project. In this way there would not be a single, static steering group meeting and the company would have a smaller steering group dedicated to with a separate reference group for external influence.

A limited group of people are set as the fixed steering group and each project assigned. An option would be to have a separate reference group based on the project type and required outcomes. This could allow for a more efficient use of senior management time while still providing a group for tollgate decisions and not losing out on a reference group looking in and offering advice.

**ALTERNATIVELY**

Steering group attendees must prioritise their time as to which steering group meetings they will attend if they have no obligation to do so.

19 Project Manager-Sponsor Relationship

Successful project management includes actively managing interactions to meet sponsor, customer and other stakeholder requirements [11]. Organisations are constantly refining the role of the project sponsor because of the risks of certain projects, where both the project sponsor and the project manager must encourage problems to be brought to the surface quickly so that they can be resolved [13]. More and more reporting is being done informally rather than formally to minimize on formal paper work and save time [13], therefore the interaction between managers and sponsors already lends itself to being an undocumented one. Today, project sponsors appear to get involved either too little or too much. The involvement is primarily a relationship between the project manager and the sponsor [13].

19.1 Commitment

Projects within companies are often referred to in terms of the project manager running them, this statement was repeated in a number of the interviews. Project managers are therefore strongly committed to their projects as they are identified with them. This does not apply to project sponsors, nor should it since there should only be one project leader. However, it lends itself to varying levels of commitment (page 103). The concept of availability, as discussed above, was not found to be an issue at Sectra or Nilfisk but more by the project managers at Elekta.

Having committed team leaders filters down through the project and is important that team members see this. Furthermore showing interest goes hand in hand with supporting the project and its goals and gives confidence to the rest of the company, especially management, that the project is being looked after. Having the project manager and sponsor working well together and committed to the
same goals is essential for project success. Strongly emphasised at Elekta since most interviewees felt without the project sponsor, the project could not exist.

**Project manager and project sponsor should be clearly allied and committed to a project. This filters down through the project team as their relationship sets the standard.**

### 19.2 Teamwork and accountability

The first team meeting in a project is a good opportunity for a sponsor to introduce themselves to the team and express their commitment to the project (page 103). This is an excellent way to start the project with high team spirit. This idea was generally promoted across all companies analysed. The concept of close team work from team members to partners was also discussed at some length through the interview process. At Nilfisk, the idea of a partnership is more the case in the early phases of the project. Throughout the project though the project sponsor is considered a team member as he or she is one of the sub-project managers working for the project manager. This idea is further supported by the strong accountability of the Nilfisk project managers for project success.

Sectra, being a smaller company the project sponsor role varies depending on the seniority of the project manager from a supporting role as a team member to a partner type role when strong mentoring is required with junior project managers.

Elekta had a variety of responses in regards to where the project sponsor fits in the project organisation and varying levels of project accountability. The responses varied from both project managers and sponsors as some expected a strict team member role while others more of a partnership role. These varying opinions can affect project outcome if there is conflict of roles and each person is not clear about theirs and the role of the opposite person. This is the concept of interdependence discussed in the theory section of this report. Having a good understanding of their own and the opposite person's role was stated by all three companies as well as in the theory, to be a strong driver of relational success and therefore project success. Each person should be ready and flexible to work according to the style of the opposite person thereby promoting relationship strength and ultimate project success.

A strong awareness as to the working style of the opposite project manager or sponsor is needed and should be clearly communicated at project commencement. Furthermore, a way to ensure project sponsor accountability is to make them partly accountable for project success through the inclusion of individual project outcomes in performance reviews.

### 19.3 Communication - Information and Requests

Some but not all of the interviews at Elekta highlighted the beneficial requirement at project start to define a communication structure for a project (page 105). At Nilfisk, the ideal relationship between project manager and sponsor was said to be one where the project manager and sponsor always work closely together through a project and understand each other as they are the main drivers for the project. A similar opinion was represented by Sectra.

This issue was especially important by all companies in regards to communicating requests, especially the project’s requirement specifications. These get passed from a project sponsor to the project and at Elekta were at times considered not to be strong enough initially. A portion of product understanding and requirements are handed over informally and verbally and this is far easier with strong project manager customer knowledge. It is essential to communicate requirements clearly and following which any required changes to scope. A clear and open flow of information was said to be optimal and a necessary facet in securing project success.

A clear, open and continuous channel of communication should always exist between project manager and sponsor.
19.4 Issue Resolution

Issue resolution can be a sensitive subject and much be handled with care and finesse (page 107). This was not mentioned in the Nilfisk interviews however Sectra did mention the challenge faced by a project sponsor, more in the case of junior project managers, where issues were kept from the project sponsor and attempted to be handled alone. This is acceptable as long as the issue is at the “right level” in terms of authority and complexity to be handled in this way and does not require sponsor involvement.

The diplomatic approach was stated by some of the Elekta project managers to be fair and just in fitting in with company policy as well as Swedish culture. In the case where major issues came out that could not be resolved between the project manager and sponsor, an Elekta project manager may easily turn to the steering group for a final decision. It was also stated that this open discussion and challenging of issues is welcomed in a project and does not negatively affect the project manager-sponsored relationship but rather improves the quality of the project.

Challenging ideas and facing issues should be welcomed at all times and escalated to the required level of authority according to their importance and sensitivity.

19.5 Reasoned Decision Making and Flexibility

These two areas have been grouped together for discussion since they are closely related especially in the main area of project scope and any required changes that need to be made to it (page 109). All three companies emphasised the need for flexibility, especially Nilfisk who stated that an initial product target area or product objective may need to be changed during a project. It is then up to the project manager and sponsor to challenge this especially when a replacement product does not have the same functionality as its predecessor. In this case it is necessary to challenge product goals to ensure the product is still well received by the market.

As discussed by Sectra it is critical the sponsor is in a required position of authority to make tough decisions. This is reflected at Elekta by the expectation of a project sponsor for a project manager to be “daring” at times as well and make decisions on scope unless he or she does not feel comfortable, in which case a discussion between the two is essential.

Decisions should be made using the required knowledge and level of authority. This applies directly to scope changes regarding product functionality to ensure the best product is the project’s ultimate outcome.

20 Lessons Learned

The analysis of the lessons learned database was chosen primarily as a source of information but this evolved as the interviews progressed. This was due to very interesting responses through as well as the concept of application of new knowledge. More time was spent analysing systems used and comparing them to each other as well as the established theory. The pure data gathered from Elekta’s database is incorporated in the Elekta and Comparative Analysis sections of this report. This discussion below is a summary with recommendations of best practices of lessons learned as a process, rather than the data contained within (page 111).

The process at Sectra is a mandatory requirement for project managers to look at similar projects within the same field and and review the lessons learned to apply them the new project before starting a new one. These ideas are then captured within new project specifications where steps taken to avoid previous problem issues should be shown. The lessons are stored in the final project reports, which are lengthy, however the process is still seen to work well. Nilfisk operates similarly in that lessons are captured in the final project report and the report is stored and can be easily accessed through their Intranet. Noted though that there is no requirement to do so. The major difference is during an after action review, where the project manager goes through all the lessons identified, a person is nominated
to write up an action list distribute it after the meeting. The action list contains action items and a person responsible for implementing those major action items relating to the areas identified for improvement. In this way the effects of the lessons learned process are applied permanently and will be used in subsequent projects.

The general consensus at Elekta is that the process for collecting and storing the lessons is good however it is also widely noted that there is room for improvement in regards to their implementation. Lessons are stored in a database and can be sorted by lesson product and project area. They can also be sorted according to sponsor issues, project planning and suppliers. However, there is no formal process ensuring that these lessons are checked with the majority of project managers interviewed having little to no contact with the database. The perspective by some is that there should be no formal process to review the lessons but rather a “peer review” process both at the final project meeting and generally on a day to day basis as applicable.

Lessons learned must be captured through a project and applied to the next phases as appropriate. Furthermore, lessons from previous projects must be implemented in a structured manner ensuring the information contained within them is used and they are not repeated in subsequent projects.

Below is a graded scheme of recommendations that could be applied:

<table>
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<tr>
<th>RECOMMENDED ACTION</th>
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<tr>
<td>1 No action and allow the process to be handled without intervention by project managers, sponsors and their teams.</td>
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<tr>
<td>2 &quot;Peer Review&quot; - On a rotational basis, pair project managers together with the aim of supporting each other and offering personal experience, the same can be done between project sponsors.</td>
</tr>
<tr>
<td>3 Once every six months workshops can be held where the database is compiled and lessons (positives and negatives) are worked through by someone who knows its functionality - this may be followed up by an action list for permanent improvements</td>
</tr>
<tr>
<td>4 Database usability, accessibility must be as transparent as possible. Possibly, not everyone needs to be involved in the database but this must be counterweighted by its usability.</td>
</tr>
<tr>
<td>5 Make it part of a checklist or formal checkpoint to ensure the database is checked. Possibly making it mandatory to include this review at kickoff meetings and each meeting after each tollgate of the project.</td>
</tr>
<tr>
<td>6 Take on the approach of immediate action to be taken where a permanent change is to be made with a person responsible directly after the final project presentation.</td>
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Tab. 10: Graded Lessons Learned Action List

21 Project Success

This was studied to gain a better understanding of the goals and objectives of each person and how they interact with the opposite person to achieve these goals. It was found however that some issues were highlighted that were not directly related to the topic of this thesis and due to the importance placed on them by project managers and sponsors, they are included in part of the discussion below (page 111).

Measures of success by project managers were all the same or very similar in regards to meeting time, cost and quality requirements within each project. There are strong KPI measurements used during and at project completion by all three companies analysed. Innovation was an interesting issue brought up as a measure of success and is something all three companies pride themselves on. The main difference was that Sectra and Elekta develop new products with new technology while Nilfisk has a more conservative approach and develops new technology separately and then once tested releases it in new products. There is lower risk here which is likely to be traded off against a longer time to
mark. Process improvement may be both an issue within and outside of specific project general goals.

Sectra stated there is a strong conscious effort made to ensure each project is produced better than the last. Nilfisk has a more hard line approach to this in that they run a system known as CC5 as described in section 14.9.1 which enforced cost cutting across replacement products. These informal and formal procedures were not mentioned by Elekta however a strong aspect that came out of the interview process was the need to spend more time reflecting to improve subsequent processes. This may be linked to the fact that Elekta, self-admittedly, needs to improve there application of knowledge from their lessons learned process.

The last issue coming out from the project manager interviews regarding measures of success was in relation to market acceptance and how this is measured. At Sectra it was noted that the long term after project review does not yet formally exist however it is planned for upcoming project once they are completed. Nilfisk has a developed process in that six months to one year after project completion they re-measure product cost and then product quality through a market survey, this is then passed on to a statistics analysis company and the results returned for analysis. At Elekta there is a surveillance period between product release and project closure. This is used to evaluate the market reaction to the product and this may last anywhere from a few months up to two years, according to the responses received. Market feedback can be gained here and the project closed once a desired level of acceptance is achieved, or if there are major issues the project can remain over to fix these.

The surveillance period by some was deemed to be inversely proportional to the usefulness of the project closure report as two years on there is less interest in the project and the lessons learned are quite old by then. However, closing projects is a performance review measure that lends itself to project being closed sooner rather than later. Once the project is closed, a new one needs to be opened to fix issues and more importantly, as mentioned by project sponsors, the product is now in their hands. The responsibility of the project manager ended at project closure.

![Ultimately, the length of the surveillance period after product release and before project closure must be long enough for the project manager and sponsor to assure themselves and the company that the product is completely fit for market. This is minimised through strong project manager-sponsor communication throughout the project and is important since before a final tollgate is taken something can still be formally done by the project manager.](#)

![There should be a structured and formalised way to gain customer feedback after product roll out especially from other sales regions. This is more challenging for larger organisations in different parts of the world with many layers of staff.](#)

Measuring sales after project completion is a responsibility held by project sponsors and there was no mentioned responsibility for product sales lying with project managers. This does not apply to all projects and is especially difficult in software and hardware upgrades and service projects. The main measure of success felt by the Nilfisk project sponsor was that the product meets predetermined sales forecasts. This was not mentioned at Sectra although undoubtedly accountability rests in the same place.

At Elekta, meeting business case sales forecasts was mentioned by one of the project sponsors, however there is no formal process that measures this. Related to this was the measure of project financial return which is done at Nilfisk by using a detailed business case template that is filled in and updated throughout the project. This is something being developed at Sectra as they expand and is planned for future projects. Elekta, has a surveillance period however return on investment often cannot be determined in this time. Currently there is no formal process that compares expected to actual return on investment. A point coming out of the interviews was that without a strong business case it is difficult to know when to close the project since it is hard to know when or what business
requirements have been met.

The likely results of strong measurements against a business case is improved project forecasting during a project initiation phase. It is also a tool for upper management to hold project sponsors accountable for product viability and profitability. This will promote a strong project manager-sponsor working relationship, including increased project manager market knowledge and understanding of the business case as the project sponsor creates and updates forecasts with their support.

**Return on investment must be formally measured with net present value being the best tool. This should include a mandatory measurement process six months to one year after a final tollgate to measure actual profitability of products, a detailed business case template should be used to facilitate this.**
Part VIII. Conclusion

The major issues discussed relate directly and indirectly to the best practices identified in the relationship between the project manager and sponsor. Altogether these have led to the creation of a generic template to that can be applied to any company to measure current performance and is included in Appendix B. This is part of the intended outcomes of this dissertation.

High quality interaction between project managers and project sponsors was found to be no coincidence and exists in cases where both people understand the importance and work at it. There is a strongly highlighted need for mutual respect and a strong understanding of the complete role of the opposite person. This common theme from both parties was further emphasised in the interview process as the need to spend as much time as possible working together on a project. However, often the outcome did not always reflect this intention. Similar problematic issues were discussed in most of the interviews.

The biggest issue arising was project sponsor available time. The ideal relationship presented by sponsor interviewees suggested they would like to meet these commitments. Not meeting these commitments caused delay including cost increases and frustrated the relationship. Ultimately, it is up to a good sponsor to set aside enough time, as there should not be a need for formalising a process to force a person into a certain amount of time. It is part of their understanding of their particular role. Also presented is a course of action scheme that is graded by the significance of the change. This is presented in order to improve available time and subsequently the likelihood of an effective working relationship and project success.

The resolution of project issues especially scope creep is part of understanding the role of the opposite person and their priorities. A common suggestion from interviewees was to apply a diplomatic approach as the method of issue resolution. This diplomatic approach implies a sense of caring and responsibility for project status and overall health. A portion of project accountability should be on the project sponsor, for the reasons they as product managers have to take the final product and promote it as part of their product portfolio.

Projects with strong sponsor interest were said to generally go well while lower sponsor interest meant a lower overall priority for the project. This sometimes caused delays especially due to lack of decision making and required resources. It is to a project sponsor’s benefit to show interest and feel project accountability and even better to embrace it and impart that feeling onto the project manager and the project team.

There are challenges in looking back at a project and having quantitative measures as to the effect of the project manager-sponsor relationship on its outcome since the effects are far more qualitative. For this reason the understanding of project manager and sponsor perspectives on project success is a tool to be used to measure this in some way. Understanding the opposite person’s measures of success means their priorities are clearer and it is possible to work to meet theirs and individual project goals.

Financial comparison of product performance back to the original business case is essential in determining ultimate product profitability. Responsibility rests with the project sponsor. Measuring personal and project goals is an important factor in improving methodologies for future projects, especially in less obvious areas like the project manager-sponsor relationship.

The views and project structures in place vary between companies which further emphasises the need to be flexible and adaptive to the processes and styles of the people part of a project team. These vary due to nature of the project work, training and previous experience, however the critical point is that the interpretation is the same between each person, especially project manager and sponsor, working together.
Part IX. References

References


[9] M Hawley. Preparing for user research interviews: Seven things to remember. Mad*Pow, ND.


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Part X. Appendix

A  Project Manager Interview Questions

1. Describe your role as a project manager and your 5 key responsibilities?

2. What are the key competencies or traits of a project manager?

3. What are your expectations of a project sponsor? How should a project sponsor support the project manager?

4. What is your perception of a good project sponsor? What are the key characteristics of a good project sponsor?
   (a) Think back to the last or current project you are working on where you thought the sponsor was excellent, why was it so good?

5. How do you measure a successful relationship with the project sponsor? What are the key factors contributing to successful working relationships?

6. Describe the challenges faced with in the relationship with the project sponsor? How were those challenges overcome?
   (a) What are the effects of those challenges on project outcome?

7. What do you think of a [possibly already existing] lessons learned process, [possibly to help develop this relationship]? If one exists how do you apply it to your work?

8. Describe an ideal relationship between the project sponsor and project manager?

9. Do you think a communication process or set of guidelines could help facilitate this process? Would you follow one?

10. Describe the role of the steering group (positives or negatives)? Ideally, what do you expect from the steering group as part of supporting your projects?

11. How do you measure the overall success of the project?

B  Project Sponsor Interview Questions

1. Describe your role as a project sponsor and your 5 key responsibilities?

2. What are the key competencies or traits of a project sponsor?

3. What are your expectations of a project manager? How should a project manager support the sponsor?

4. What is your perception of a good project manager? What are the key characteristics of a good project manager?
   (a) Think back to the last or current project you are working on where you thought the sponsor was excellent, why was it so good?

5. How do you measure a successful relationship with the project manager? What are the key factors contributing to successful working relationships?

6. Describe the challenges faced with in the relationship with the project manager? How were those challenges overcome?
(a) What are the effects of those challenges on project outcome?

7. What do you think of a [possibly already existing] lessons learned process, [possibly to help develop this relationship]? If one exists how do you apply it to your work?

8. Describe an ideal relationship between the project sponsor and project manager?

9. Do you think a communication process or set of guidelines could help facilitate this process? Would you follow one?

10. Describe the role of the steering group (positives or negatives)? What is your role within or interaction with the steering group, describe?

11. How do you measure the overall success of the project?
## C Project Manager-Sponsor Test

The ranking system is as follows:

1. Poor or Not Planned
2. Fair or Not Applied
3. Good or Sometimes Applied
4. Excellent or Always Applied

<table>
<thead>
<tr>
<th>Area or Issue</th>
<th>Recommendation</th>
<th>Company Status (Comment)</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business case knowledge and awareness</td>
<td>High market contact for the project manager and a strong understanding of business objectives.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer requirements to project objectives</td>
<td>Use reference user groups in all projects. This will decrease initial pressure placed on customer requirements documentation and give the project team a better understanding of the functionality required by customers from the customers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adaptive application of each persons role</td>
<td>Clearly defined role requirements are essential but should be applied flexibly. However, applied only in conjunction with a high awareness of the individual project sponsor or manager that each person is working with.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scope changes</td>
<td>Scope changes should always be met with an open mind and a critical discussion on their consequences. Direct refusals and surprising, significant and enforced required changes should be avoided.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude and personality</td>
<td>Mutual Respect with a continuously open and open-minded line of communication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sponsor Availability</td>
<td>Significant sponsor available time is critical for project success. Lack of time must be adequately explained and action should be taken by the sponsor to the mitigate negative impacts.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General sponsor expectation</td>
<td>Project manager and sponsor project involvement should be equal at many times through the project. The need for this level of support is essential and should not be underestimated.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project support</td>
<td>A project manager and sponsor must feel the project is their own, like parents to a child. It must be supported it when it needs additional work or resources and defended cohesively if it begins to slip.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decision making</td>
<td>Sponsors must be “daring” to make some decisions without delaying to go to the steering committee. Equally project managers should only turn to a sponsor when they are uncomfortable in making a decision.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area or Issue</td>
<td>Recommendation</td>
<td>Company Status (Comment)</td>
<td>Score</td>
</tr>
<tr>
<td>-------------------------------</td>
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<tr>
<td>Sponsor project knowledge</td>
<td>A sponsor must show interest and be strongly involved in the project they sponsor. They should have the knowledge to be able to present to the steering committee in most project areas on behalf of the project.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| General steering group process| A limited group of people are set as the fixed steering group and each project assigned. An option would be to have a separate reference group based on the project type and required outcomes. This could allow for a more efficient use of senior management time while still providing a group for tollgate decisions and not losing out on a reference group looking in and offering advice.  
**ALTERNATIVELY**  
Steering group attendees must prioritise their time as to which steering group meetings they will attend if they have no obligation to do so. |                           |       |
| Commitment                   | Project manager and project sponsor should be clearly allied and committed to a project. This filters down through the project team as their relationship sets the standard.                                                                                                                                                                                                                                                                                                                                                                                                                    |                           |       |
| Teamwork and Accountability  | A strong awareness as to the working style of the opposite project manager or sponsor is needed and should be clearly communicated at project commencement.  
Furthermore, a way to ensure project sponsor accountability is to make them partly accountable for project success through the inclusion of individual project outcomes in performance reviews.                                                                                                                                                                                                                                                                                                                                                                               |                           |       |
<p>| Communication - Information and Request | A clear, open and continuous channel of communication should always exist between project manager and sponsor.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                           |       |
| Issue Resolution             | Challenging ideas and facing issues should be welcomed at all times and escalated to the required level of authority according to their importance and sensitivity.                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                           |       |
| Reasoned decision making     | Decisions should be made using the required knowledge and level of authority. This applies directly to scope changes regarding product functionality to ensure the best product is the projects ultimate outcome.                                                                                                                                                                                                                                                                                                                                                                                                                                |                           |       |
| Lessons Learned - Capture    | Lessons learned must be captured through a project and applied to the next phases as appropriate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                           |       |</p>
<table>
<thead>
<tr>
<th>AREA OR ISSUE</th>
<th>RECOMMENDATION</th>
<th>COMPANY STATUS (COMMENT)</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lessons Learned - Implementation</td>
<td>Lessons from previous projects must be implemented in a structured manner ensuring the information contained within them is used and they are not repeated in subsequent projects. The value of lessons is held in their implementation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measuring Success - Surveillance Period</td>
<td>Ultimately, the length of the surveillance period after product release and before project closure must be long enough for the project manager and sponsor to assure themselves and the company that the product is completely fit for market and that there are no issues outstanding that should have already been dealt with through scope changes earlier in the project.</td>
<td></td>
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</tr>
<tr>
<td>Measuring Success - Global customer feedback</td>
<td>There should be a structured and formalised way to gain customer feedback after product roll out especially from other sales regions. This is more challenging for larger organisations in different parts of the world with many layers of staff.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measuring Success - Business Case</td>
<td>Return on investment must be formally measured with net present value being the best tool. This should include a mandatory measurement process six months to one year after a final tollgate to measure actual profitability of products, a detailed business case template should be used to facilitate this.</td>
<td></td>
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</table>

**Outcomes**

**19-37 Poor**

A Poor result suggests there are many significant areas requiring improvement. More than that however is that there is clearly large problems in interaction between project managers and sponsors at the analysed company. It is quite likely many projects are under performing and not meeting project deadlines by significant percentages. Furthermore, major changes may need to be made to working styles and processes used in projects, the suggestion would be to hire professional consulting firms to aid in this process.

**38-50 FAIR**

A Fair result suggests there are some things that are being done alright but there are many areas in which the company is either under performing or failing. The recommendations below may apply to some of these areas lacking however it is likely that some major changes need to be made regarding working styles and processes used in projects within the company. The suggestion would be to hire a professional consulting firm to aid in this process.
51–67 Good
A Good result suggests that mostly things are being done quite well and projects are being completed close to their various deadlines. The recommendations below may apply to some of these areas lacking and it is likely that some major or multiple minor changes need to be made regarding working styles and processes used in projects within the company. This result may however be satisfactory if project process and organisation styles are unique to a specific company and they are already working well. The use of an external consultant is advisable to help implement some of the more significant changes in the areas requiring improvement. However, a consultant is not necessary but a significant review of problem areas should be carried out by the relevant people and action lists should be drawn up with responsible people allocated to executing each change.

68–80 Excellent
An Excellent result suggest that things are being done very well across most areas examined in this document. There may be some changes that could be made in certain areas to improve processes and the tables below may help with suggestions for improvement. It is likely that most project are finishing close to their deadlines and if not, the reasons are likely to be outside the scope of this evaluation. It is likely that any required changes to be made can be done internally by managers within the company. This is a high score for this test and suggests that employees are well educated and experienced in the areas covered.

Score

---
Sponsor Availability

<table>
<thead>
<tr>
<th>Recommended Action</th>
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<tbody>
<tr>
<td><strong>1</strong></td>
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<tr>
<td><strong>2</strong></td>
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<td><strong>3</strong></td>
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<tr>
<td><strong>4</strong></td>
</tr>
<tr>
<td><strong>5</strong></td>
</tr>
<tr>
<td><strong>6</strong></td>
</tr>
</tbody>
</table>

Lessons Learned

Below is a graded scheme of recommendations that could be applied:

<table>
<thead>
<tr>
<th>Recommended Action</th>
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<tbody>
<tr>
<td><strong>1</strong></td>
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<td><strong>2</strong></td>
</tr>
<tr>
<td><strong>3</strong></td>
</tr>
<tr>
<td><strong>4</strong></td>
</tr>
<tr>
<td><strong>5</strong></td>
</tr>
<tr>
<td><strong>6</strong></td>
</tr>
</tbody>
</table>

Communication
<table>
<thead>
<tr>
<th>Form</th>
<th>Formal</th>
<th>Informal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face-to-face</td>
<td>In the form of structured team or project meetings. An agenda is likely to be followed. A project steering group is the ideal place for this.</td>
<td>Can be held at someone's desk, in the hallway, lunchroom etc. No premeditation and more “casual” conversation. A relaxed atmosphere where ideas can be bounced around and great forum for private or topical feedback to be given. Excellent for building relationships and not be to underestimated.</td>
</tr>
<tr>
<td>Virtual</td>
<td>Virtual meetings, both aural and visual can be used especially when project members are not in the same place.</td>
<td>A short one-on-one phone call or conversation to discuss minor project issues or ask for advice. No formal structure, excellent for building relationships. This is extremely important when project sponsor time is limited. Quick, cheap, effective.</td>
</tr>
<tr>
<td>Written</td>
<td>In the form of correspondence and official documentation. This must have appropriate content and form where timeliness is often critical.</td>
<td>Most likely in the form of correspondence (e.g., emails). This may not have any formal structure. This is a quick and effective means of communicating, especially on-the-go with the use of technology.</td>
</tr>
</tbody>
</table>
D Comparative Analysis

D.1 Introduction

This section is a role by role and issue by issue comparison of each of the companies interviewed against each other and the established theory. This was an important part of understanding perspectives from different companies and bringing in an external influence into the main company analysed, Elekta. They are included here in the report as the information is taken from here in the Discussions and Recommendations section of the report.

D.2 Roles

Each of the following roles has been given as ID number in order to connect the roles and characteristics of a project manager to a project sponsor. Each number corresponds to the same number in the opposite table. The effect on project outcomes has been given a ranking scale of A-D to show the extent of the effects on project outcomes, these were measured by considering the impact on project performance of removing that responsibility or characteristic from a project manager or sponsor. Furthermore, these rankings were based on the emphasis on each area by interviewees however interviewees were not asked to directly evaluate each area. This is an important part of measuring the impact of each person’s roles on final project outcomes since each of them can be affected by the opposite person, both directly and indirectly, as shown in table 2 and 4. The ratings are:

A Very strong
B Strong
C Weak
D Very weak

D.2.1 Project Manager

<table>
<thead>
<tr>
<th>ID</th>
<th>Theory Role and Characteristics</th>
<th>Elekta's Perspective</th>
<th>Nilfisk's Perspective</th>
<th>Sectra's Perspective</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Accountable for the project and its teams success.</td>
<td>Define the project objectives and the product to be produced. Develop a plan to make this happen. Executed the plan.</td>
<td>The NAPD is responsible for planning and executing the project.</td>
<td>The project manager is responsible for planning and executing the project.</td>
<td>A</td>
</tr>
<tr>
<td>ID</td>
<td>Theory Role and Characteristics</td>
<td>Elekta's Perspective</td>
<td>Nilfisk's Perspective</td>
<td>Sectra's Perspective</td>
<td>Effect</td>
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</tr>
<tr>
<td>2</td>
<td>Awareness of the business case</td>
<td>Harder for software projects especially if the project is the re-factoring of code. In one large project there is almost complete project manager responsibility. This knowledge is used to promote and sell the project within the company and the team. Most agreed knowledge especially on market status and changes are beneficial.</td>
<td>More than awareness at Nilfisk. Accountable for sales after the product launch relating back to the initial marketing information supplied at project commencement.</td>
<td>There is no requirement for project managers to know a lot about the business case after T4. Due to the smaller nature of Sectra, generally the project managers know a lot about the business case. There is very close interaction between project managers and sponsors within the company.</td>
<td>B</td>
</tr>
<tr>
<td>3</td>
<td>Clear description of project objectives given to the project team - sell these to the team</td>
<td>Project manager must sell the project internally within the group - Sell it to the team in terms of objectives, why are we doing this? (business case)</td>
<td>Control the specifications of the project according to the market requirements specified by the project sponsor. Ensure the product then fulfils the specifications set out</td>
<td>This is especially important in regards to continuously selling the project to the team and “making it fun and interesting to work on”.</td>
<td>A</td>
</tr>
<tr>
<td>4</td>
<td>Role model - mentors project team members</td>
<td>Diplomatic. Role model to coach and provide support to team members, to push and carry the team by putting in extra work as required.</td>
<td>He or she must also be an adviser and coach for the sub-project managers and facilitate the interface between each of them.</td>
<td>This was not specifically mentioned.</td>
<td>B</td>
</tr>
<tr>
<td>5</td>
<td>Removes obstacles for the project team.</td>
<td>Close relationship with many other functions within the company such as purchasing, logistics, section managers, product management and facilitate interaction.</td>
<td>Not specifically mentioned but implied through the support for sub-project managers.</td>
<td>This was no specifically mentioned but implied in the project manager responsibility of securing resources for the project and therefore the team.</td>
<td>B</td>
</tr>
<tr>
<td>6</td>
<td>Provide an open line of communication between him or herself and within the team</td>
<td>Strong people skills - Understand how people work, be open-minded. Be serious and honest but friendly easy to work with.</td>
<td>There is close dialogue between project sponsor and manager especially in the first phases of the project.</td>
<td>This was mentioned and emphasised as a common practise always yielding positive results.</td>
<td>A</td>
</tr>
<tr>
<td>ID</td>
<td>Theory Role and Characteristics</td>
<td>Elekta's Perspective</td>
<td>Nilfisk's Perspective</td>
<td>Sectra's Perspective</td>
<td>Effect</td>
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<tr>
<td>7</td>
<td>Holds the project team accountable for meeting their commitments</td>
<td>Should manage and lead the team and delegate tasks and responsibility. Especially important in making quality vs time compromises.</td>
<td>The steering group presentation with template format where it has been found to be effective to hand over responsibility and accountability of each section to each sub-manager.</td>
<td>Not specifically mentioned</td>
<td>A</td>
</tr>
<tr>
<td>8</td>
<td>Timely project reports to the sponsor (and customer in some cases) and the steering committee</td>
<td>Monthly reports to the steering group. Very varied responses based on sponsor involvement. From complete, with no formal reporting required, to very little, sponsor getting information or asking questions at the steering group meetings with the rest of the steering group.</td>
<td>Report and explain to steering committee project status. Ensure there are weekly meetings between the project manager and sponsor at to review task lists and time plans.</td>
<td>Biweekly or weekly reports to steering group including sponsor. Similar reports to product portfolio council.</td>
<td>B</td>
</tr>
<tr>
<td>9</td>
<td>Facilitates the Project Plan development</td>
<td>Responsible for project plan development and execution.</td>
<td>Responsible for project plan development and tracking.</td>
<td>Agreed</td>
<td>A</td>
</tr>
<tr>
<td>10</td>
<td>Defines resource requirements and negotiates with the executives for resources</td>
<td>Responsible for negotiating with line managers with resources. Sponsor can make this much easier with their active support. The project sponsor is expected to feel responsible for helping secure resources for their project.</td>
<td>The project manager should secure the resources required for the project from the required people such as research and development or personnel from a factory for input on production.</td>
<td>Agreed as this is part of the responsibility of the project manager to secure the resources for the project.</td>
<td>A</td>
</tr>
<tr>
<td>ID</td>
<td>Theory Role and Characteristics</td>
<td>Elekta's Perspective</td>
<td>Nilfisk's Perspective</td>
<td>Sectra's Perspective</td>
<td>Effect</td>
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<tr>
<td>11</td>
<td>Facilitates the development of the impact analysis for change requests (scope)</td>
<td>Show consequences of scope changes to delivery time and required resources, especially people. People as a resource could be more critical than additional cost. Project managers are expected to meet change requests with resistance and agree to them if the benefits can be shown in the business case.</td>
<td>When product objectives need to be changed during the project, it is up to the project manager and sponsor to discuss this.</td>
<td>The project sponsor may push to get the most out of the project and to increase scope of a running project. If this is the decision then the implications of it must be shown by the project manager.</td>
<td>B</td>
</tr>
<tr>
<td>12</td>
<td>Responsible for proving project objectives have been met</td>
<td>When it comes to measuring the project outcome against the business case, this is usually done by the project manager in the complete project closure report. It is noted that there may be a lack of data at times to do this effectively.</td>
<td>Present for the final tollgate proving success in the areas of current expected product cost, project time line, project cost, product reliability, product quality once in the market and units sold.</td>
<td>Agreement</td>
<td>B</td>
</tr>
<tr>
<td>13</td>
<td>Facilitates the lessons learned process after evaluations are received</td>
<td>Responsible for collecting lessons throughout the project and presenting them in the final project report. Then storing them in a database.</td>
<td>The responsibility rests with the project manager.</td>
<td>Project manager final report and external consultant within input into CAPA database.</td>
<td>C</td>
</tr>
<tr>
<td>14</td>
<td>Writes recommendations for improvement</td>
<td>No responsibility. Admittedly by most as a place for improvement at Elekta.</td>
<td>An action list relating to each lesson was written up directly after the meeting, it was noted that there is no one responsible in following up the action list however this was not seen to be a big issue.</td>
<td>Not specifically mentioned but the concept exists in the mandatory checking of previous lessons from the final project report</td>
<td>C</td>
</tr>
<tr>
<td>ID</td>
<td>Theory Role and Characteristics</td>
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<td>Nilfisk's Perspective</td>
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<tr>
<td>15</td>
<td>Knowledge [11]</td>
<td>All project managers have a technical background with most certified or planning to be certified by the Project Management Institute standards.</td>
<td>They must have a technical background and a good business and market sense. Ultimately there should be a good balance between their commercial skill set and technical knowledge.</td>
<td>The project manager should be good at project planning, tracking and possess good project administration skills. They should also have a technical understanding of the technology being developed.</td>
<td>A</td>
</tr>
<tr>
<td>16</td>
<td>Attitude and Personality [11]</td>
<td>Problem solver, diplomat, enthusiastic, open minded, adaptive and friendly.</td>
<td>Share a vision with the sponsor on how to go from project to product.</td>
<td>They should be charismatic and enthusiastic, friendly, easy to work with and open-minded.</td>
<td>B</td>
</tr>
<tr>
<td>17</td>
<td>Leadership [23][11]</td>
<td>Should be a role model, results oriented, inspiring, and the main driving force behind the team.</td>
<td>Must have leadership qualities especially motivating people to excel.</td>
<td>Running the project is similar to a company, being the manager is like being the general manager.</td>
<td>A</td>
</tr>
<tr>
<td>18</td>
<td>Coordinator and Communicator [23]</td>
<td>Structured person - to facilitate the creation of a strong project plan with the team showing how the product will be realised from specifications. Layout a communication strategy to all stakeholders that is clear throughout the project.</td>
<td>Should have many formal and informal meetings throughout the project with sponsor and the team.</td>
<td>A good team should know time to market is key and PM should approach the steering committee with appropriate solutions to problems. Communicate frequently with the sponsor on project status.</td>
<td>A</td>
</tr>
<tr>
<td>19</td>
<td>Team Player [23]</td>
<td>A project manager must be a team role model and lead by example ensuring the team is always moving in the right direction. This may require extra work on a slipping project to support and “carry the team”.</td>
<td>Not specifically mentioned.</td>
<td>The project manager needs to ensure the team really understands project goals and what needs to be achieved. He or she should “feed the project with energy”.</td>
<td>A</td>
</tr>
<tr>
<td>ID</td>
<td>Theory Role and Characteristics</td>
<td>Elekta's Perspective</td>
<td>Nilfisk's Perspective</td>
<td>Sectra's Perspective</td>
<td>Effect</td>
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<tr>
<td>20</td>
<td>Credibility - Technical and Administrative [17]</td>
<td>Technical background with technical experience. Project management toolbox through experience and certification. Credibility gives respect not only within the project but the organisation as a whole.</td>
<td>A good balance between their commercial skill set and technical knowledge.</td>
<td>Good at project tracking, administrating and always follow up. Good planning and execution skills.</td>
<td>B</td>
</tr>
</tbody>
</table>

Tab. 13: Comparison of Project Manager Role
### D.2.2 Project Sponsor

<table>
<thead>
<tr>
<th>ID</th>
<th>Theory Role and Characteristics</th>
<th>Elekta's Perspective</th>
<th>Nilfisk's Perspective</th>
<th>Sectra's Perspective</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Accountable for the success of the business case</td>
<td>The project sponsor should initiate, argue and get priority for the project and build up the business case based on market knowledge and feedback from the sales department, strategy meetings, contact with users. Stay on top of the business case ensuring the product develops as intended.</td>
<td>Initiate the project and ensure the product fulfils the market requirement and the sales organisation buys in to the project ensuring this will be a product that they can sell.</td>
<td>The sponsors fundamental role within the project is writing customer or market specifications and guiding the project to ensure it is moving in the right direction.</td>
<td>A</td>
</tr>
<tr>
<td>2</td>
<td>Driver for project success</td>
<td>The sponsor must definitely be a working sponsor and should not turn up once a month for a report. They should promote the project internally and externally, when applicable.</td>
<td>Only as far as the project meets the business case requirements</td>
<td>Only as far as the project meets the business case requirements</td>
<td>B</td>
</tr>
<tr>
<td>3</td>
<td>Clear description of business case - sell this to the project manager and the rest of the company</td>
<td>Deliver the customer requirements document and help the project manager interpret customer specifications</td>
<td>Use knowledge to put together a product concept and present the idea to the company.</td>
<td>A project sponsor must make the assignment of the project clear and make sure that he understands and agrees with project specifications. The sponsor is expected to always update the business case.</td>
<td>A</td>
</tr>
<tr>
<td>4</td>
<td>Role model - mentors the project manager</td>
<td>Not specifically mentioned.</td>
<td>Not mentioned.</td>
<td>A senior project manager with the same scope and boundary conditions and can be relied on to deliver with less guidance however, more guiding is required for juniors.</td>
<td>B</td>
</tr>
<tr>
<td>ID</td>
<td>Theory Role and Characteristics</td>
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<td>Nilfisk's Perspective</td>
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<tr>
<td>5</td>
<td>Removes obstacles that the project manager cannot remove on his or her own.</td>
<td>Promote the product internally to the company and the project manager ensuring resources can be secured throughout the project especially until the design is finalised at T3</td>
<td>Not specifically mentioned.</td>
<td>Once there is a problem and the project needs to go outside of the initial boundaries, must support the project manager in getting this approved within the company</td>
<td>B</td>
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<tr>
<td>6</td>
<td>Provide an open line of communication between him or herself and the project manager</td>
<td>It was noted that the project works better when the communication process is set up early so that an open relationship to have discussions and overcome issues, solutions and compromises exists.</td>
<td>Close contact with the project manager and engineers developing the product or platform.</td>
<td>A lot can be achieved through informal interaction where both people are talking almost daily throughout a project.</td>
<td>A</td>
</tr>
<tr>
<td>7</td>
<td>Holds other managers accountable for meeting their commitments.</td>
<td>It helps when the project sponsor is in a higher position of authority to support the project manager in their requests. This was also made easier in internal projects when the sponsor is a line or resource manager.</td>
<td>Not specifically mentioned</td>
<td>Not specifically mentioned</td>
<td>A</td>
</tr>
<tr>
<td>8</td>
<td>Timely project reports (referenced to the business case) to the Project Steering Committee or Board as well as the customer or client</td>
<td>The sponsor and the project manager should both be present at the steering group, perhaps more of the detail by the project manager in relation to status updates and more sponsor presentation in regards to project strategy. It was suggested that more frequency should exist in sponsor to steering group presentations.</td>
<td>Maintain market contact especially with sales companies to ensure they know the product road map. Rarely presents on project status to steering group.</td>
<td>The project manager expects the sponsor to update the business case given the status of the project and market development. Due to smallish nature of Sectra, sponsor does not present to steering group.</td>
<td>B</td>
</tr>
<tr>
<td>ID</td>
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<tr>
<td>9</td>
<td>Reviews and approves the Project Plan.</td>
<td>Not specifically mentioned however the project time line is critical since the business case has a required time to market.</td>
<td>Not specifically mentioned but implied through the importance of pushing time to market over competitors.</td>
<td>Time deadline issues arise, resources or a technical problems then the scope may need to be changed and the sponsor is expected to approve this</td>
<td>A</td>
</tr>
<tr>
<td>10</td>
<td>Reviews and approves change requests (scope)</td>
<td>Changes are often necessary to ensure a product's marketability. These may be met by resistance by the project manager but should be discussed accordingly and a combined decision should be made, or go to the steering group for a final decision.</td>
<td>From the start to the end of the project the sponsor must ensure the product is the right product and meets the correct positioning in the market the sponsor should be active through prototyping and offers advice on product design</td>
<td>Changing the scope, the sponsor is needed once there is a problem and the project needs to go outside of the initial boundaries (more resources or time). A good sponsor should act quickly.</td>
<td>A</td>
</tr>
<tr>
<td>11</td>
<td>Responsible for evaluating and proving project outcomes meet the business case</td>
<td>A surveillance period between tollgate 4 and 5 exists however it was noted that much of the business case cannot be proved due to its generally short duration. There is currently no formal process in place to analyse product outcomes against the business case (eg. units sold, servicing costs).</td>
<td>Responsible for outcome of business case and main priority is that product sells to expected values.</td>
<td>Project success can be assumed once it has been validated that the project fulfils the requirements of the customer.</td>
<td>B</td>
</tr>
<tr>
<td>12</td>
<td>Additional Source of input into project lessons learned</td>
<td>Often but not always the project sponsor is involved in the lessons learned process.</td>
<td>Not directly involved.</td>
<td>Not specifically mentioned.</td>
<td>B</td>
</tr>
<tr>
<td>13</td>
<td>Takes recommendations for improvement to the Project Steering Committee or Board</td>
<td>Not mentioned however suggested that this is the role of the project manager.</td>
<td>Not specifically mentioned, more in the role of the project manager</td>
<td>Not specifically mentioned, more in the role of the project manager</td>
<td>C</td>
</tr>
<tr>
<td>ID</td>
<td>Theory Role and Characteristics</td>
<td>Elekta's Perspective</td>
<td>Nilfisk's Perspective</td>
<td>Sectra's Perspective</td>
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<tr>
<td>14</td>
<td>Knowledge [11]</td>
<td>In line manager sponsored projects technical is required but not market understanding especially where the project is software related. Generally he or she should have strong market understanding as well as internal organisational structure and processes.</td>
<td>Should have excellent market understanding, product manufacturing requirements.</td>
<td>The sponsor should have the required abilities for the role. The sponsor should also have good planning and execution skills.</td>
<td>C</td>
</tr>
<tr>
<td>15</td>
<td>Attitude and Personality [11]</td>
<td>A sponsor should be open minded, innovative, investigative. This will produce better results for the projects.</td>
<td>Analyse lots of information from many sources. Focused on strategy but also adaptive to change.</td>
<td>They should be charismatic and enthusiastic. They should be friendly, easy to work with and open-minded.</td>
<td>A</td>
</tr>
<tr>
<td>16</td>
<td>Champion [18]</td>
<td>The more time spent with a project the better, this may not be required to the same extent in smaller projects. The project sponsor should have a “helicopter view” of the project and monitor its overall direction.</td>
<td>Monitor project from start to end ensuring direct project outcomes rather than a zig-zag as project direction is changed.</td>
<td>Guiding the project to ensure it is moving in the right direction. To avoid project delays the time line or scope may need to be changed, the sponsor must be able to confident decisions quickly.</td>
<td>B</td>
</tr>
<tr>
<td>17</td>
<td>Reviewer [18]</td>
<td>The project sponsor is responsible to ensure the product being created will meet customer specifications and should spend time with the team in prototyping and facilitating market feedback through themselves and direct contact between the market and the team.</td>
<td>Project runs the risk of diverging without input from the sponsor. The sponsor must prioritise their work and push to get involved to understand small details at time to ensure the project stays on track.</td>
<td>Should be a part of a project’s frequent meetings, biweekly steering group and strategic product council meetings. Ensure the project is always working within the agreed specifications.</td>
<td>A</td>
</tr>
<tr>
<td>ID</td>
<td>Theory Role and Characteristics</td>
<td>Elekta’s Perspective</td>
<td>Nilfisk’s Perspective</td>
<td>Sectra’s Perspective</td>
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<tr>
<td>18</td>
<td>Communicator [18]</td>
<td>There may be conflict of interest or external activities that pressure the project from the outside. These should be discussed with the project manager and solved together without concerning the project team members. A sponsor should be effective at communicating with a wide variety of people from the market to the project manager to the team. An important part of this is to decide the level of confidentiality of the project that applies both internally and externally.</td>
<td>They must communicate well or the project could be delayed or confusion could be created as to actual objectives.</td>
<td>A project manager may need guidance from the sponsor and the steering committee especially junior managers where there is a higher chance that issues will occur and the project will not be delivered as expected.</td>
<td>A</td>
</tr>
<tr>
<td>19</td>
<td>Team Player [23]</td>
<td>There were very mixed responses and roles were assumed as both a team member and project speaking partner. This should be clear depending on the project sponsor and manager in each individual project.</td>
<td>More of a higher traditional sponsor role until project second tollgate then completely a team player and working as product manager within the project.</td>
<td>Attend weekly or biweekly meetings to check status and identify main project risks as well as what can be done by the steering committee to help the implementation of the project goals.</td>
<td>A</td>
</tr>
<tr>
<td>20</td>
<td>Credibility [17]</td>
<td>Seniority supported by experience and market knowledge is essential in the role in supporting resource requirements and providing quality market feedback.</td>
<td>Credible in that he or she is required to be product expert within its market.</td>
<td>Project sponsor decisions must be made and the team and project manager should feel confident in it being the right decision.</td>
<td>B</td>
</tr>
</tbody>
</table>

Tab. 15: Comparison of Project Sponsor Role
### D.3 Expectations from the opposite person

#### D.3.1 Project Manager expectations of the project sponsor

<table>
<thead>
<tr>
<th>Expectation</th>
<th>Elektas Perspective</th>
<th>Nilfisks Perspective</th>
<th>Sectras Perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presentation of the business case and</td>
<td>Clearly present the business case and customer specifications document ensuring the</td>
<td>Expected to define and update customer needs and come up with a requirements</td>
<td>The project manager expects the sponsor to generate and update the business case</td>
</tr>
<tr>
<td>Customer requirements</td>
<td>required “End Effects” must be obvious and reinforced. Help to define and set up the</td>
<td>specification involving research and data collection to find what type of product is</td>
<td>including market size and estimated sales volumes given the status of the project</td>
</tr>
<tr>
<td></td>
<td>objectives and boundaries of the project.</td>
<td>needed by the market. Align with company strategy.</td>
<td>and market development.</td>
</tr>
<tr>
<td>Quick and Reasoned Decision making</td>
<td>Varied responses. Quick decisions on scope, the sponsor needs to be “daring” at</td>
<td>Sponsor authority was not mentioned as it is not an issue, project manager has the</td>
<td>It is expected that the sponsor has the required authority and availability to make</td>
</tr>
<tr>
<td></td>
<td>times to make these decisions. On the other end the sponsor is there for advice and</td>
<td>authority. Therefore quick decision making is less important.</td>
<td>informed and quick decisions.</td>
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<td></td>
<td>project manager makes the decisions regarding the project execution.</td>
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</tr>
<tr>
<td>Market feedback</td>
<td>The sponsor is the link between the customer or market and the project. They should</td>
<td>Creditability is important as sponsor is expected to have a strong market understanding</td>
<td>The sponsor should be able to make rapid decisions and have credibility through the</td>
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<tr>
<td></td>
<td>know the needs and demands of the customer and make decisions on scope.</td>
<td>although the project manager is accountable to accepting that information.</td>
<td>appropriate qualifications for the job.</td>
</tr>
<tr>
<td>Contact with the project team</td>
<td>The sponsor often has direct contact with the project team to answer their questions,</td>
<td>The sponsor should maintain close contact with product line managers and the engineers</td>
<td>The sponsor is expected to be involved directly with the team especially when there</td>
</tr>
<tr>
<td></td>
<td>this should be done according to the communication plan established at project</td>
<td></td>
<td>are questions relating to the functionality of the product</td>
</tr>
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<td></td>
<td>commencement. He or she is expected to inspire the project team and promote the</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>project and its benefits to users. Facilitate time with reference user groups.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXPECTATION</td>
<td>ELEKTA’S PERSPECTIVE</td>
<td>NILFISK’S PERSPECTIVE</td>
<td>SECTRA’S PERSPECTIVE</td>
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</tr>
<tr>
<td>Flexible and adaptive to change</td>
<td>The sponsor should show constant interest in the project. Reinforce the business case and challenge it when required and be flexible and adaptive to issues within the project or market as they arise, taking quick decisions. Compromises over functionality and scope resulting in the need to gain additional resources or move the project release date.</td>
<td>The sponsor should prioritise his or her work to ensure the project stays on track according to customer requirements.</td>
<td>A good sponsor ensures that the project manager is always working with the agreed project specifications.</td>
</tr>
<tr>
<td>Support and defend the project</td>
<td>When additional resources are required, the sponsor should help the project manager secure these resources. The project needs to be supported. Understanding, accepting or defending the project against others as to why it’s late especially with a shared view alongside the project manager. Could be due to design difficulties, scope changes especially at steering group meetings.</td>
<td>The sponsor should be active within the project especially through prototyping and should advise on product design. No mention of attending meetings but it is assumed they do.</td>
<td>A good sponsor should be a part of a project’s frequent meetings such as the biweekly steering group meetings and the strategic product council meetings as well.</td>
</tr>
<tr>
<td>Be a team player</td>
<td>Be a team member of the project to whom tasks can be assigned where project manager role has evolved to a more business oriented one. There were varied responses on sponsors ability to present to the PSG from unable or unnecessary to presenting with help or presenting completely on their own.</td>
<td>The sponsor must be more of a team member and it is uncommon to be a steering group speaking partner unless issues presented are directly related to marketing issues.</td>
<td>Unique situation in smaller company where the sponsor is part of the steering group and product portfolio council and sponsors the project.</td>
</tr>
</tbody>
</table>
### Expectation

**Elekta’s Perspective**

- Promote the project internally and externally: The sponsor is expected to take the project, promote it and strongly support its role-out through the organisation.

**Nilfisk’s Perspective**

- The sponsor is expected to have prepared required marketing launch materials and a marketing plan for the new product. The sponsors should maintain market contact especially with sales companies to ensure they know the product road map.

**Sectra’s Perspective**

- Not specifically mentioned but seems like a logical expectation.

<table>
<thead>
<tr>
<th>Accountability</th>
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<tbody>
<tr>
<td>Elekta’s Perspective</td>
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<td>Nilfisk’s Perspective</td>
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<tr>
<td>Sectra’s Perspective</td>
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</table>

### D.3.2 Project Sponsor expectations of the project manager

**Tab. 17: Comparison of Project Manager Expectations of Project Sponsor**

<table>
<thead>
<tr>
<th>Expectation</th>
<th>Elekta’s Perspective</th>
<th>Nilfisk’s Perspective</th>
<th>Sectra’s Perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create project specifications</td>
<td>The project manager needs to create and have an excellent understanding of the project requirements. One sponsor suggested that he or she should help the project manager interpret the specifications.</td>
<td>The project manager should control the specifications of the project according to the market requirements specified by the project sponsor.</td>
<td>A project manager is expected to stay on top of the scope and deliverables.</td>
</tr>
<tr>
<td>Manage the time plan</td>
<td>The project manager is expected to ensure the project stays on the required time line.</td>
<td>It is then up to the project manager to ensure the product then fulfils the specifications set out.</td>
<td>The project manager should ensure the project is moving according to the time plan.</td>
</tr>
<tr>
<td>Review chosen project solution and project budget</td>
<td>Expected to be open and ready to implement change. Time for product iteration should be allowed. Assumed, however no mention of budget monitoring.</td>
<td>The project manager should review concepts that lead to decisions to be made that affect design, product specifications, and quality. These should include the sponsor or at the very least inform the sponsor.</td>
<td>He or she should monitor project budget including budget accuracy however tracking of the research and development budget is done by the research and development manager.</td>
</tr>
<tr>
<td><strong>EXPECTATION</strong></td>
<td><strong>ELEKTA’S PERSPECTIVE</strong></td>
<td><strong>NILFISK’S PERSPECTIVE</strong></td>
<td><strong>SECTRA’S PERSPECTIVE</strong></td>
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</tr>
<tr>
<td>Facilitate frequent meetings</td>
<td>There should be a good and continuous line of communication between the project manager and sponsor where the “right” level of information is passed over.</td>
<td>The project manager should ensure there are weekly meetings between the project manager and sponsor at least at the beginning on the project in which revise of task lists and time plans can take place. This contact should be supplemented by many informal meetings throughout the project</td>
<td>The project manager is expected to communicate frequently with the sponsor so both people know exactly what is happening in the project.</td>
</tr>
<tr>
<td>Market understanding or knowledge</td>
<td>The more market knowledge the better, it is understood this takes time and commitment and market interest or the desire for stronger market knowledge varies from project manager to project manager.</td>
<td>A good project manager also has some interaction with the market and ensures that they fully understand the market they are developing for. The project manager assumes personal responsibility for this and more.</td>
<td>A good project manager should know everything about the business case of the project and the documents and presentations that exist as part of the role of the project sponsor.</td>
</tr>
<tr>
<td>Flexibility towards project scope</td>
<td>The project manager is expected to be innovative and discuss required changes or compromises that need to be made, this is especially important if new market understanding or requirements develop during a project.</td>
<td>The project manager should understand the need to change especially in response to competitor actions. The manager must keep the project on track and compare the current solution against the original market specifications from the project sponsor. This is facilitated by a close dialogue between project sponsor and manager.</td>
<td>The project manager should be good at project tracking, possess good project administration skills and therefore always follow up on what is happening within the project. For example, a good team and manager knows time to market is especially key and will approach the steering committee with a solution of cutting away part of the project to stay on plan.</td>
</tr>
<tr>
<td>Expectation</td>
<td>Elekta’s Perspective</td>
<td>Nilfisk’s Perspective</td>
<td>Sectra’s Perspective</td>
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</tr>
<tr>
<td>Charisma and attitude</td>
<td>A project manager should understand the dynamics of the company knowing who to go to for different requests and approach each one with the required attitude and communication etiquette. Knowledge and understanding of informal company structure is highly valued.</td>
<td>Not specifically mentioned however assumed, keeping in mind only one interview was performed with one project sponsor.</td>
<td>A good project manager is energetic and puts a lot of effort into the project, in a sense he or she “feeds the project with energy”. He or she should be quite charismatic in order to get the team enthusiastic and excited about the project. This is especially important in regards to continuously selling the project to the team and “making it fun and interesting to work on”.</td>
</tr>
<tr>
<td>Innovative</td>
<td>Noted to be excellent when the project manager surprises the team or product management with new ideas or by applying external influence from recent developments in other industries without Elekta investing in an existing solution. He or she should avoid scope creep but keep in mind things can be done a multiple ways which could be simpler or faster. This means actively challenging and seeking for “low hanging fruit”.</td>
<td>A good project manager should not just reuse existing solutions and should be able to improve and challenge these so the product has new and innovative features.</td>
<td>Not specifically mentioned but assumed by keeping in mind only one project sponsor was interviewed.</td>
</tr>
</tbody>
</table>

Tab. 19: Comparison of Project Sponsor Expectations of Project Manager
### D.4 Project Manager-Sponsor Relational Factors

<table>
<thead>
<tr>
<th>Type</th>
<th>Theory</th>
<th>Elekta’s Perspective</th>
<th>Nilfisk’s Perspective</th>
<th>Sectra’s Perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factor - Commitment</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Driver</strong></td>
<td>Common goals and commitment from team members, necessary availability to ensure project success. Professionally interesting and stimulating work.</td>
<td>Sponsor commitment is generally a big issue. This is affected by their product management role however varying project manager responses suggests varying levels of chosen commitment by project sponsors.</td>
<td>The project manager should ensure there are weekly meetings between the project manager and sponsor supplemented by many informal meetings throughout the project. The process is said to work well.</td>
<td>Project sponsors should be a part of all project meetings as part of their commitment to the project. This was said to be done well at Sectra.</td>
</tr>
<tr>
<td><strong>Challenge</strong></td>
<td>Lack of team member commitment or available time. Lack of project challenge and interest.</td>
<td>Availability in terms of sponsors time can be an issue at different stages on the project due to the fact that product management has many products to cover not just the product in the current project.</td>
<td>Availability of a sponsor is critical but has not been a big issue. If there are problems with availability the project manager may run into difficulties, although this was said to rarely be an issue.</td>
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<tr>
<td><strong>Factor - Team Focus</strong></td>
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</tr>
<tr>
<td><strong>Driver</strong></td>
<td>Good team cohesion Professional growth potential encourages hard work and team play.</td>
<td>There is always close dialog between project managers and their team. Project sponsors are encouraged to have direct contact with the team according to the agreement with the project manager. Varying responses on where a sponsor feels he or she fits in, as a partner or strict team member.</td>
<td>There is generally close dialogue between the project manager and sponsor. The NAPD must have leadership qualities especially motivating people to excel.</td>
<td>There is a lot of interaction between the project manager and sponsor. The relationship is generally friendly and easy going which works well to promote project success.</td>
</tr>
<tr>
<td>Type</td>
<td>Theory</td>
<td>Elekta's Perspective</td>
<td>Nilfisk's Perspective</td>
<td>Sectra's Perspective</td>
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<tr>
<td>Challenge</td>
<td>Unclear team leadership and power struggle</td>
<td>A good project manager-sponsor relationship filters down into the team relates back to being a role model as a key PM characteristic.</td>
<td>There was no mention of relational issues issues in this area, positively or negatively.</td>
<td>The project manager also considers project success with softer issues such as that the team members enjoyed the project and feel they have personally progressed. This was something noted to be very beneficial in subsequent projects although a challenge</td>
</tr>
<tr>
<td>TYPE</td>
<td>THEORY</td>
<td><strong>ELEKTA’S PERSPECTIVE</strong></td>
<td><strong>NILFISK’S PERSPECTIVE</strong></td>
<td><strong>SECTRA’S PERSPECTIVE</strong></td>
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| Driver | Clear project plans and objectives  
Sharing information and communicating needs | There should be a close relationship between project manager and sponsor throughout the project. Generally project sponsor should facilitate and then monitor project objectives defined from customer specifications. An open relationship should promote the ease at which needs and changes can be discussed. | The ideal relationship between project manager and sponsor was said to be one where the project manager and sponsor always work closely together through a project. They must understand each other as they are the main drivers for the project. | Communicate often so both people know exactly what is happening in the project. If changes are required requiring input from the opposite person, these must be communicated quickly. Achieve this through informal interaction where both people are talking almost daily throughout a project. |
| Challenge | Lack of overall project direction stemming from unclear objectives  
Communication problems | Adding features, scope creep, could be in the interest of the sponsor as the final product carries more functionality however it means the project is growing in size therefore decisions taken to add extra scope must be responded to by their consequences - extra time and cost. The sponsor must be a constant clear source of information to keep the project on track. | There was no mention of relational issues in this area, positively or negatively. | This may be an issue with more junior project managers where information might be withheld and attempted to be handled on their own. In regards to changing the scope, the project manager needs the sponsor once there is a problem and the project needs to go outside of the initial boundaries, ie need more resources or time due to technical problems. A good sponsor should act quickly. |
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<tr>
<th>Type</th>
<th>Theory</th>
<th>Elekta’s Perspective</th>
<th>Nilfisk’s Perspective</th>
<th>Sectra’s Perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driver</td>
<td>Clearly defined role and authority; includes project outcomes in performance reviews Recognition of sense of accomplishment</td>
<td>Clear lines of responsibility should be established throughout the project. Project manager is ultimately responsible. Sponsors should feel accountable for the project outcome regardless of their official accountability. As product managers they will live with the project outcomes.</td>
<td>The NAPD is accountable for overall project success relating to all measured KPIs as well as sales after the product launch relating back to the initial marketing information supplied at project commencement. Project sponsor feels responsible for meeting sales volumes with minimal negative product feedback.</td>
<td>Project members should feel they enjoy a project and share its success as they are part of it. The project manager is ultimately accountable but the project sponsor is accountable for the performance of the product after the project closes down.</td>
</tr>
<tr>
<td>Challenge</td>
<td>Lack of role definition leading to conflict and confusion; leading to lack of accountability Insufficient rewards</td>
<td>Varying responses from project managers and sponsors on the required level of involvement and sense of accountability that should be felt by the sponsor, from almost equally accountable to simply a source of information for the project.</td>
<td>There is a positive conflict here as both parties feel responsible for after project product performance.</td>
<td>There may be issues with more junior or newer project managers as they may understand the clearer points of their role but require the sponsors support to feel confident they are making the correct decisions. They know they are accountable but may be unsure of how to ensure success.</td>
</tr>
<tr>
<td>Type</td>
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<tr>
<td>Factor - Issue Resolution</td>
<td>Driver</td>
<td>Good interpersonal relations and shared values</td>
<td>Mutual respect and open lines of communication were often mentioned a key part of project success. The project manager and project sponsor should work together as a team to find a solution to all problems albeit with different roles but they should always share the same view on the direction for the project.</td>
<td>Both parties must communicate well or the project could be delayed or confusion could be created as to actual objectives. They should share a vision as to how to get the desired product to market through the project.</td>
</tr>
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<td></td>
<td>Challenge</td>
<td>Conflict among team member or between team and support organisations</td>
<td>Conflict was albeit rarely mentioned between the project manager and sponsor however ultimately the issue gets solved by the steering group. The sponsor should be very supportive especially at times when a project is slipping.</td>
<td>The project manager should be adviser and coach for the sub-project managers and deal with any conflicts between each of them. The sponsor is part of that team of sub-managers.</td>
</tr>
<tr>
<td>Type</td>
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<tr>
<td>Driver</td>
<td>Qualified, competent team personnel with strong knowledge on all roles in the project</td>
<td>Clear lines of responsibility are a supporting factor to interdependence but some project structures differ along with the roles. All project managers have a technical background to effectively handle those issues while sponsors should have a stronger marketing and customer relations background or experience.</td>
<td>The ideal relationship between project manager and sponsor was said to be one where the project manager and sponsor always work closely together through a project. They must understand each other as they are the main drivers for the project.</td>
<td>A good project manager should know everything about the business case of the project and the documents and presentations that exist as part of the role of the project sponsor.</td>
</tr>
<tr>
<td>Challenge</td>
<td>Poor personnel selection lacking bigger picture knowledge outside of the technical aspects of the project or the opposite of lacking knowledge of internal workings of a project.</td>
<td>The main factor was related to lack of interest especially due to heavy technical issues where a project sponsor does not provide the same support as other issues. A sponsor should know the requirements and impacts of their role as a source of market feedback.</td>
<td>A good project manager also has some interaction with the market and ensures that they fully understand the market they are developing for. The project manager expects that the sponsor understand he or she is in charge.</td>
<td>This is not an issue at Sectra as it is a smaller company where similar staff work on all the main projects, especially senior personnel who seem to be aware of most of what happen in Sectra.</td>
</tr>
<tr>
<td>Type</td>
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<tr>
<td><strong>Factor - Reasoned Decision Making</strong></td>
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<tr>
<td><strong>Driver</strong></td>
<td>Proper technical direction and team leadership</td>
<td>Project managers and sponsors should be committed and professional individuals. Project managers should have key technical knowledge related to the project. Leadership and credibility are earned through qualifications and experience.</td>
<td>A project manager should have a good balance between their commercial skill set and technical knowledge. The project sponsor should be an analyst, find feasible compromises between customer needs and product functionality. Flexible adapt to market changes.</td>
<td>Both the project manager and sponsor have the required abilities for the role. Especially important in this is that both people understand the relationship between the business case and the project. The sponsor makes quick, smart decisions and discusses with the stakeholders involved from the CEO to the different line managers.</td>
</tr>
<tr>
<td><strong>Challenge</strong></td>
<td>Poor qualification of team or project leader</td>
<td>Qualification is not an issue with Elekta. Experience, regarding newer project managers is largely related to their Elekta experience and are mentored by more established project managers</td>
<td>Project manager may face sponsor issues of a lack of true market understanding, a lack of understanding of the process of manufacturing a product and developing a new strategy for the future. A sponsor needs a project manager to have market awareness and not just technical focus on saving costs and meeting schedule; Postpone a project to better understand and meet customer requirements.</td>
<td>Sometimes a challenging are junior project managers and a lack of confidence to be strong in front of the project team. If this is the case it may be difficult to steer and stay in control of the project. This person then needs additional guidance from the sponsor and the steering committee.</td>
</tr>
<tr>
<td>TYPE</td>
<td>THEORY</td>
<td>ELEKTA’S PERSPECTIVE</td>
<td>NILFISK’S PERSPECTIVE</td>
<td>SECTRA’S PERSPECTIVE</td>
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<tr>
<td>Factor - Flexibility</td>
<td>Driver</td>
<td>Good planning resulting in resource allocation set out in the project plan or making changes as required. Management involvement and support.</td>
<td>A sponsor should follow a project from start to end and ensure it is always on the right track to meet customer requirements along with the project manager. This may be from personal knowledge or contact or facilitated through reference user groups.</td>
<td>The manager and sponsor must track and compare the current project solution against the original market specifications from the project sponsor. This is facilitated by a close dialogue between project sponsor and manager.</td>
</tr>
<tr>
<td>Challenge</td>
<td>Insufficient resources and lacking of sponsor authority. Lack of senior management of support, interest and involvement.</td>
<td>A mentioned issue was lack of sponsor authority or confidence to make important decisions quickly and alone. Changes should always be discussed, not flat out refused, and made as required with reference to time line and cost including additional resources.</td>
<td>Flexibility can also sometimes be lacking as an initial product target area or product objective needs to be changed during the project. Then it is up to the project manager and sponsor to challenge this especially when a replacement product does not have the same functionality as its predecessor. In this case it is necessary to challenge product goals to ensure the product is still well received by the market.</td>
<td>It is expected that the sponsor has the required authority and availability to make informed and quick decisions. Scope may need to be changed and the sponsor is expected to approve this. The sponsor should be able to make rapid decisions and have credibility through the appropriate qualifications for the job.</td>
</tr>
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</table>

Tab. 21: Comparison of Project Manager-Sponsor Relational Factors
D.5 The lessons learned process

<table>
<thead>
<tr>
<th>STAGE</th>
<th>Elektas Perspective</th>
<th>Nilfisks Perspective</th>
<th>Sectras Perspective</th>
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</thead>
<tbody>
<tr>
<td>Capture</td>
<td>Capture takes place along the way and is presented at project completion. This is seen to be done very well by everyone</td>
<td>Capture takes place at the end of a project some lessons are forgotten or the process is rushed since the next big project has started and is demanding time</td>
<td>Lessons are captured in the final project report. An external consultant analyses each project along the way and presents a similar overall project report.</td>
</tr>
<tr>
<td>Storage</td>
<td>Final project reports are stored and can be easily accessed. Lessons learned are stored in a database with varying opinions of its accessibility and usability.</td>
<td>Final project reviews are stored but not the lessons individually. The action list is however stored. See next point.</td>
<td>Final project reviews are stored but not the lessons individually.</td>
</tr>
<tr>
<td>Application</td>
<td>There is no officially mechanism ensuring project staff look back at lessons learned from projects. The majority believe that a checklist item would be sufficient. A six monthly lessons learned workshop could be run, rotating project manager pairing to share experience or completely informal sharing were all suggested.</td>
<td>One of the most important factors of this process was that each major lesson highlighted was assigned an action item with a person responsible for its implementation into the Nilfisk project process. This was a common procedure and the action list was written up directly after the meeting, it was noted that there is no one responsible in following up the action list however this was not seen to be a big issue.</td>
<td>It is mandatory to look at similar projects within the same field and look at the lessons learned there that could be applied to the new project. The project process says that project managers should review lessons learned before starting a new project and these ideas are then captured within the project specifications where steps taken to avoid previous problem issues should be shown.</td>
</tr>
<tr>
<td>Culture and process perception</td>
<td>Currently the general perception is that Elektas is not so good at learning from lessons yet in a formal way. However it must be noted that low staff turnover means that most people know these from past projects and can advise on new ones but only done informally.</td>
<td>There could however be room for improvement in terms of highlighting issues after tollgate eight, which is six months to one year after the initial release. Since that is a while after the product is released to the market, project activities have stopped and people must then go back to remember lessons learned.</td>
<td>It was noted that the reports can be lengthy thereby reducing readability but overall the process works well.</td>
</tr>
</tbody>
</table>

Tab. 23: Comparison of Lessons Learned Processes

D.6 Measuring Success
<table>
<thead>
<tr>
<th><strong>Measure</strong></th>
<th><strong>Elekta’s Perspective</strong></th>
<th><strong>Nilfisk’s Perspective</strong></th>
<th><strong>Sectra’s Perspective</strong></th>
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<tbody>
<tr>
<td><strong>Project Manager</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Time</td>
<td>Measure project time within margins</td>
<td>Measure project timeline compared to expected</td>
<td>Measure time compared to project plan and ensure it is within acceptable margins</td>
</tr>
<tr>
<td>Cost</td>
<td>Measure project budget within margins</td>
<td>Measure expected product cost along the way and finally at the end</td>
<td>Measure cost compared to project plan and ensure it is within acceptable margins</td>
</tr>
<tr>
<td>Specifications</td>
<td>Delivered the “right” product that has been tested and customer feedback received and applied</td>
<td>Measure product reliability and product quality once in the market</td>
<td>Measure quality compared to project plan and ensure it is within acceptable margins - more easily measured two years after project completion</td>
</tr>
<tr>
<td>Reproducibility</td>
<td>Ensure reproducibility</td>
<td>Measure units sold</td>
<td>Measure the timeliness of each tollgate</td>
</tr>
<tr>
<td>Market Acceptance</td>
<td>Not currently employed although product surveillance period between product release and project closure is similar and is included in Elekta’s Product Creation Process.</td>
<td>6 months to 1 year later re-measure product cost and then product quality through market survey.</td>
<td>Planned business case reviewal process being developed</td>
</tr>
<tr>
<td>Personal Development</td>
<td>The concepts of personal growth are strong within the Elekta team and they are recorded through performance reviews and are highly valued.</td>
<td>Not mentioned however as stated before only one project manager was interviewed so it is difficult to make a definite conclusion.</td>
<td>Project team members feel they have progressed personally</td>
</tr>
<tr>
<td>Process Improvement</td>
<td>Overdue non-conformances from internal audits can be monitored. An informal indicator of the status for a process is the Improvement Suggestion list, an increase in suggestions in a particular area suggests attention is required.</td>
<td>Nilfisk has a scheme called CC5 where CC5 is calculated as the saving in percent of product cost on new models that have a corresponding replacement model. The saving is calculated as an average across all replaced models based on the sales volume of the existing models. This means that volume split changes to a new project is taken out of the equation.</td>
<td>New product ideas must be better than the previous one, lower cost, more functionality and better product stability.</td>
</tr>
<tr>
<td>Innovation</td>
<td>Measure of innovation measured against patents attained</td>
<td>Not specifically mentioned</td>
<td>Not specifically mentioned</td>
</tr>
<tr>
<td>Measure</td>
<td>Elekta’s Perspective</td>
<td>Nilfisk’s Perspective</td>
<td>Sectra’s Perspective</td>
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<tr>
<td>Self-satisfaction</td>
<td>The benefit of the product to the patient in that the doctor can now do a better job because of the product, this was noted to be hard to measure</td>
<td>Not specifically mentioned although it could apply to a company offering cleaning services.</td>
<td>Not specifically mentioned however as stated before only one project manager was interviewed so it is difficult to make a definite conclusion.</td>
</tr>
<tr>
<td>Measure</td>
<td>Elekta’s Perspective</td>
<td>Nilfisk’s Perspective</td>
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<tr>
<td>Sales</td>
<td>Mentioned by one of the project sponsors interviewed, the consensus otherwise was that there is no formal process to measure this against expectations set out in the business case.</td>
<td>Sell to predefined sales targets</td>
<td>Not specifically mentioned</td>
</tr>
<tr>
<td>Customer</td>
<td>It was noted success is achieved when the end product fulfils the clinical need. Measuring this is done during product validation which is after the product has been used clinically, before tollgate 4. Continuous prototyping helps ensure the product meeting requirements.</td>
<td>This is when sales figures are as expected or better with minimal negative quality and market feedback</td>
<td>Project should fulfil customer requirements</td>
</tr>
<tr>
<td>Requirements</td>
<td>Part of the surveillance period is to ensure “x” amount of units are produced but this was more strongly emphasised by project managers.</td>
<td>Not mentioned although assumed since all products are produced in large numbers</td>
<td>Enough units of the product have been produced to ensure to the product is reproducible</td>
</tr>
<tr>
<td>Reproducibility</td>
<td>The tollgate four and five check lists do some comparison against business case elements however there is no formal process that compares after project outcomes to the business case. However there were mixed responses on this whether this is informally being done or not. Noted that this is not applicable to all types of projects,</td>
<td>This is done although not in regards to warranty claims</td>
<td>Follow up of the business case does not yet exist but it is planned for 12 months after the current major project ends. Project manager thought this already existed.</td>
</tr>
<tr>
<td>Business case analysis</td>
<td>The tollgate five checklist covers some return on investment factors however it was noted that this is too early to come, depending on the estimated payback period. Otherwise there is no formal process that checks this.</td>
<td>Not mentioned by the sponsor however the project manager stated that he or she holds responsibility for this. There is a detailed business case template that is used throughout the project.</td>
<td>Break even time is measured and tracked and updated throughout the project.</td>
</tr>
<tr>
<td>Financial returns</td>
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</tr>
<tr>
<td>Measure</td>
<td>Elektä’s Perspective</td>
<td>Nilfisk’s Perspective</td>
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<tr>
<td>Time</td>
<td>Expected time to market is measured against the project deadline, this is successful if the project completes as expected.</td>
<td>Measure project deadline - Time to market</td>
<td>Not specifically mentioned as being tracked by a sponsor</td>
</tr>
<tr>
<td>Product Cost</td>
<td>This was mentioned multiple times since an output product from a project belongs to the product managers and the product should be delivered at expected cost as well as within expected manufacturing cost.</td>
<td>Not mentioned by the sponsor however the project manager stated that he or she holds responsibility for this. There is a detailed product costing template that is used throughout the project.</td>
<td>This was not specifically mentioned however as stated before only one project sponsor was interviewed so it is difficult to make a definite conclusion.</td>
</tr>
</tbody>
</table>

Tab. 25: Comparison of Measures of Success