JÖNKÖPING INTERNATIONAL BUSINESS SCHOOL
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Chief Information Officer

- A business strategy resource?

Bachelor thesis in Informatics

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Abstract

This thesis aims at describing the CIO role from the perspective of two interviews and the literature on the subject. Our research questions mainly focus on the actual work of a CIO and are answered by providing a framework on how to view the CIO and the influence of the CIO. Influence meaning both on business and IT strategy. We have answered what the CIO role implies and how it is used in different organizations. To do this we have scanned current literature and also conducted two interviews with CIO's from completely different organizations and resources. A framework for understanding how the IT strategy and business strategy is linked with the CIO as a resource has been created and our interview findings are presented in this framework. We have also found that the CIO with little involvement in overall business strategy decisions has less influence on the IT strategy. This is explained by the nature of the organization and the view of IT.

A CIO's primary function could be to strategically align IT with business or to make sure that the IT systems runs flawless. These can be viewed as counterpoints but since the role today is changing from being operative to working more with strategic questions it is not a strange finding. The influence a CIO has in business strategy questions ranges from none to a lot, based on how the CIO role is defined by the organization. This is also well in line with the view of IT. When viewing IT as something that has the possibility to gain competitive advantage, IT gain more credibility, hence the CIO gains more influence on business strategy decisions. We also found that the CIO not only has the overall responsibility of IT in the organization, but also that s/he is supposed to work with questions of concern to the business. This forces the CIO to have an understanding of the end-customer, which in itself creates a better understanding for the business strategy. The CIO should work with questions that not only meet the current demand of the organization they support, but also future needs and potential opportunities where IT can be of specific interest.

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1 Introduction

The Information Technology (from now on IT) market is changing rapidly, what is considered modern to day might very well be outdated tomorrow. This has forced organizations to view IT as a continuously changing organism that needs to be controlled. Strategies are formed years in advance, often in combination with the business strategy. This has led to organizations creating a new role, the Chief Information Officer. The Chief Information Officer (CIO) is on the top of the IT hierarchy and responsible for the strategic IT development. The title CIO is fairly new and the responsibilities and rights are not as undeniable as they are in many other traditional roles. The CIO has been given the task to make sure that IT strategy becomes aligned with the overall business strategy (De Sutter, 2003). This is done for organizations to compete with IT e.g. as a resource for better decision making and increased business process performance.

Today information technology has an essential role for organizations and its business. This because of the focus on global markets, e-commerce and the continuous innovations offered on the IT market. When used properly IT becomes critical for business performance due to the functionality and information improvement it can provide (Broadbent & Kitzis, 2005). IT and its functions are getting more and more important in the global economy with the weight of accuracy and speed of information. Organizations need to understand the global market and be able to respond to it fast, for this to work in an efficient manner someone has to be responsible for the functionality and performance of the IT systems in use. By aligning IT and business strategy, organizations can find value in their IT investments in a more tangible way. The value given from IT often appears from how the IT strategy is related to the overall business objectives. For organizations to be successful in working with their IT functionality they need guidance. What strategic alignment means is that IT is used by organizations in order to reach business objectives as part of the critical business processes instead of being a supporting department. By working with strategic alignment, organizations can create real business value and a competitive advantage from their IT investment. A problem that enterprises can have from an IT perspective is that the senior management decides the rights and investments the CIO has, as well as the organization's need of information technology (Weill & Ross, 2004). If the senior management does not acknowledge the competence or lack trust in the CIO, it is likely they will not see the importance of giving adequate resources for IT projects and therefore they might not comprehend the possible value in their investments.

This thesis aims at describing the current view of the CIO. The responsibilities, rights and influence on IT and on the organization as a whole. We are focusing the research on large organizations since the IT strategic role of the CIO implies a larger and more complex organizational structure in order to achieve its intended purpose.

1.1 Problem and background

Today's research is focusing a lot on the alignment between the IT strategy and business strategy. In other words, the importance of IT knowledge in strategic business decisions, how to integrate IT in business. The present research is getting further into the CIO role as a benefit in important strategic decisions and the role itself has expanded further up in the hierarchy and also the roles responsibilities (McNurlin & Sprague, 1998). The role CIO is facing a radically change more into the leader of the enterprise instead of a mechanic leader. With meaning that in the past top IT manager (today the CIO) was more into the

operational duty, and today a part of the top management team (Broadbent & Kitzis, 2004). Even though the strategic job, to align the IT resources with the business goals, is becoming the central part of the CIO's work. There are issues besides strategic responsibility the CIO should handle. Parts of today's discussion of what a CIO should focus on, is more into the control of IT resources in organizations. Another issue is the problem of IT departments that put to much effort in operation and support tasks, instead of focusing on adding value of the organizations IT resources to the business. (CIO Sweden, 2006).

Another description of what today's CIO have as the major responsibility, is all the company's technology, to coordinate and manage the information systems, as a senior level manager, (Sisco, 2001) but also as the manager that deals with operational and strategic problems, but put more effort in the strategic questions that will benefit the organization in a longer perspective.

Delisi, Danielson and Posner describe the relationship between the CIO and the Chief Executive officer (CEO) as crucial since they have to understand each other's roles and objectives for a successful use of IT (Cited in Delisi, Peters, 2002). Better use of IT gives organizations better decision-making grounds. Although this is the case, organizations still seem to fail in understanding the full potential business performance gain by the use of IT as a strategic resource.

Delisi, Danielson and Posner also describe the CIO as a role similar to the CEO but for the IT department. This means that the CIO has to take responsibility for the strategic work and continuous improvements of the IT area. CIO's must see the value of IT in a holistic perspective since IT is mainly supposed to help organizations reach their overall business objectives. The strategic value and use of IT as a competitive force for the organization is becoming increasingly important. A problem with this is that CIO's claim to be more involved in technical problems than in developing organizational strategies (Cited in Delisi, Peters, 2002). In organizations where the CIO and CEO work together to form plans and strategies, a better understanding of the full potential benefit of IT for the business can be gained.

Though there are special elements the role should focus on and have knowledge about. McNurlin and Sprague (1998) identify the major CIO responsibilities as:

- To understand the business and to create value from IT
- Create credibility to increase confidence higher up in the hierarchy
- Ad technology maturity for easier use by employees
- Establish goals and mission that will be followed
- Create an information system architecture that will support the goals and vision in the future for the company
- Look after and develop relationships both internal and external. Example, senior management, front/back office relationships and other stakeholders

The different views of what a CIO should focus on and its tasks, is depending on how the organization is structured and how large the company is. However, the important thing is that the CIO has the information and knowledge on what to do considering business benefits, both strategic and operational.

The area of concern is problematic in itself due to the continuous changes in the IT environment. Since there are a lot of views of what the CIO should be doing we have decided to look into what they are really doing and how their responsibilities are. This thesis will describe the responsibilities and rights of the CIO, put in the context of the alignment between business strategy, and IT strategy. By attaining information regarding the responsibilities and influence of the CIO, knowledge about their contribution and value for the business will be created. We have formed four research questions to help us fulfill our purpose.

The research questions are as follows:

- What are the responsibilities and rights of the Chief Information Officer?
- What can a Chief Information Officer contribute for business strategy?
- What is the Chief Information Officers primary function?
- Does the Chief Information Officer have influence outside the traditional IT-questions?

The research questions intend at clarifying the actual function of the CIO with a strategic alignment focus in order to find out the CIO influence in questions regarding IT and business strategy.

1.2 Purpose

This thesis will provide knowledge about the actual function and responsibilities of the CIO in large organizations, regarding IT-specific questions, strategic business questions and the link between them.

2 Theoretical Framework

As part of our theoretical framework a few terms need to be defined. The definitions we have chosen are not the only ones. They do however explain what is meant when used in this thesis. Present research will also be dealt with in this chapter; we will try to present a brief picture on what is being written about the CIO today.

The key terms we define are meant to work as a guide to the upcoming chapters. How we have chosen to define these terms will have great impact on our results and analysis.

2.1 Key concepts

The different key terms have all numerous definitions that slightly differ from each other. We will present what we believe to be the most accurate definitions for our study. Since the thesis aims at describing the role of the CIO and the width of the responsibility, we must define the most commonly discussed hierarchal person above, the CEO. In addition, the person below in the hierarchy, the IT manager has to be defined. As part of the definitions, a model displaying their relationship will be presented.

With IT specific questions, we use a definition taken from Nationalencyklopedin (2006) that IT specific question are questions concerning all technical possibilities created by the continuous progress in technology. With this definition, IT specific questions implies a wide range of activities, such as hardware related, information systems related and all kinds of business supporting IT systems.

During this thesis, we have made a distinction between the IT strategy and business strategy to better explain their relationship.

2.1.1 Chief Information Officer

"The Chief Information Officer or CIO is a job title for a manager responsible for information technology within an organization, such as a listed company or an educational institution" (Wikipedia, 2006)

Since the research questions mainly concern the job position Chief Information Officer, we see the definition as very significant and important for our continuing study. This to gain a shared view of what the role implies. The title Chief Information Officer will be referred to as CIO in this paper. While our research questions aim at describing the work of the CIO, this definition will provide insights regarding the position and how it is described in the literature.

Starting with the basis, the CIO is the top manager of the IT department.

"The most senior executive responsible for identifying information and technology needs and then delivering services to meet those needs" (Broadbent and Kitzis, 2004 page 6)

Broadbent and Kitzis (2004) describe that the function of a CIO in today's technology based businesses is commonly used, though not always with the label CIO. They explain other titles they have come across like IT director, information manager, and IT services, which could also have about the same tasks. However, we will not define all different titles' regarding managing IT, instead focusing on describing CIO since that is the title we are interested in.

The job description of a CIO differs depending on the organization in focus, considering how the company is structured, how big the organization is, or what their business function is. There are many types of tasks for a CIO depending on how the organization works. Examples are those who manage an IT department, those working in headquarters, those who manage the gap between information technology and information systems, those who focus on the strategic issues in enterprises. Even though all of these tasks above can be mixed and shared between many different people in the IT department, it is also very common that all of the tasks are on the CIO's duty. The most important thing is to see that the CIO has the major responsibility of the IT towards the rest of the enterprise business.

Broadbent and Kitzis (2004) describe some priorities that they think a CIO should focus on. These are, to lead, know the enterprise and the competitive surroundings, have a vision on what IT can support for business value, identify business needs and strategies, to unit business and IT strategy, develop a high-quality team, and to manage the risks with IT through the organization. They mention that these priorities do not all have to be what a CIO must do, but a variety of tasks leads to better achievement.

Many of these priorities describe the value of aligning IT and business in order to get most profitability of IT investments. This is interesting for this thesis due to many proofs we have found in the literature emphasizing the importance for strategic alignment, and the CIO's view of how business and IT strategy are combined.

Regarding the importance of IT for today's business, the CIO aims at delivering IT with value to the business, and to report regularly to CEO (Chief Executive Officer) or the Chief Financial Officer (Wikipedia, 2006) to maintain the strategic goals of the business.

Our definition of the CIO is,

"The highest hierarchal IT manager controlling the information flow thru out the organization, with help of information technology as an investment. Aiming to aid the business and create competitive advantage with the alignment of department strategies."

2.1.2 Chief Executive Officer

"The executive with the chief decision-making authority in an organization or business" (Britannica Online)

The Chief Executive Officer later referred to as the CEO needs to be defined due to the relationship with the CIO. As mentioned earlier, the CIO most commonly reports to either the CEO or the Chief Financial officer. We have chosen to use the CEO as the example in this thesis due to the hierarchal position in organizations, but also since we focus on the relationship between IT and business strategy and the CEO is said to be responsible for the business strategy (Huselid, Becker & Beatty, 2005).

The CEO has the overall strategic responsibility and therefore responsibility over the IT strategy, even if not directly. The CEO is the embodiment of the business strategy and at the top of the corporate hierarchy with only the board of directors to answer to. The CEO is often a member of the board as well. (De Sutter, 2003)

Although this might be the most common understanding Laurie (2000) describes the CEO as the highest problem solver in an organization. What the CEO is actually doing is identifying and solving problems. Or may be more accurate, enabling others to solve problems. (Laurie, 2000) However, the CEO is responsible for the business strategy and the profit-

ability. The business strategy and business profitability in today's market is often dependent on IT. Therefore, the connection between the CEO and CIO becomes apparent.

2.1.3 IT manager

The role of the IT manager is a role with wide fields of responsibilities, including the usual IT fields such as security, IS development and IT-support. IT managers can also be a part of almost any other department, such as accounting, marketing and sales. (Holtsnider & Jaffe, 2001)

Given the IT manager the above definition, the IT manager is a person responsible for a pre decided area but not as high in the hierarchy of the organization as a CIO. The IT manager in large enterprises becomes part of the middle management.

We see the IT manager as a person not necessarily working in an IT department. And although the IT managers report to the CIO as their closest superior, they will not be dealt with any further in this thesis. They are only mentioned to make the distinction between the IT manager and the CIO. Since the thesis aims at describing the CIO role, the IT manager will only be used as part of the evidence for how IT responsibilities are divided within organizations. IT managers are responsible for following directions from the CIO, and creating services matching the IT strategy.

2.1.4 Relationship between key concepts

In order to visualize how we place the CIO in the context of IT and business strategy, we have created a model (figure 2-1). The model, which is a graphical representation of a company's business and IT strategy aims at placing a CIO in relation to these strategies as well as the CEO.

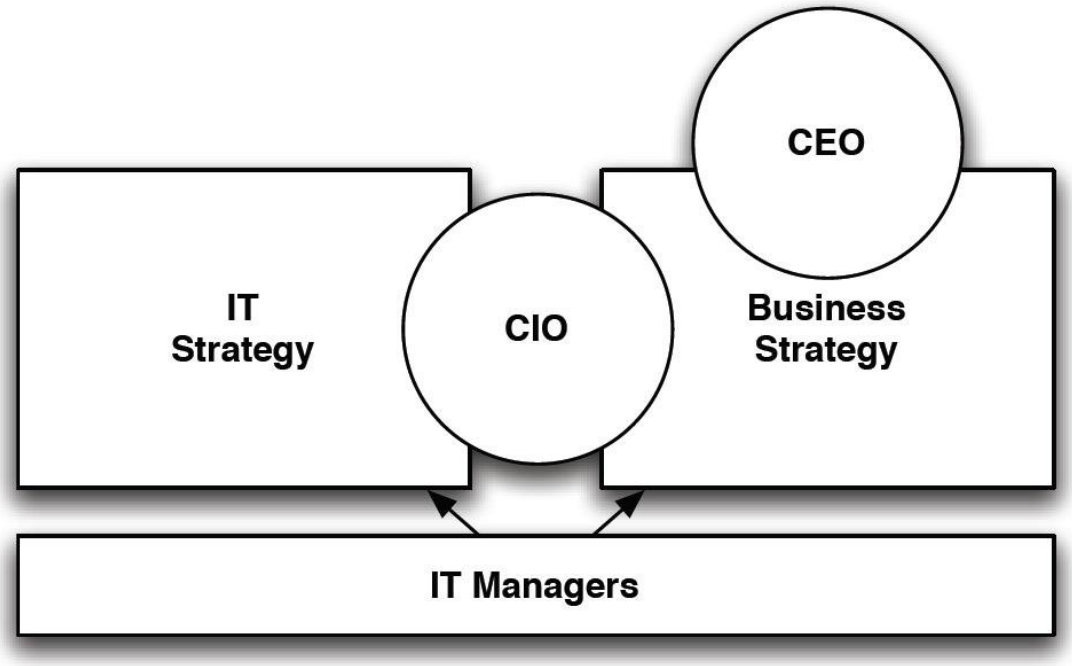

Figure 2-1, CIO Relationship

The Chief Executive Officer or CEO is the person responsible to the board of directors over the business strategy and stock performance (Carey & Ogden, 2000) This gives the meaning that the CEO is overall responsible for an organizations well being. That they do not have an operational responsibility in large organizations is supported by the fact that the numbers of CEO's moving across industries are increasing annually (Carey & Ogden, 2000). Although the CEO might have some kind of overall strategic responsibility over the IT department, we will not become engrossed on the subject.

The IT strategy is the strategy that covers IT related issues. According to Rapp (2002), organizations that want to gain competitive advantage by using IT need to consider IT strategy as integrated with their overall business strategy. The overall responsible person for the IT strategy is the CIO

Figure 2-1 represents the view that the CIO is the link between the IT and business strategy. The CIO has the responsibility to align the IT strategy with the current business strategy (Broadbent & Kitzis, 2004). The figure also suggests that IT managers can be found at different areas of the organization as they are supposed to serve different parts of the organization with their specific expertise.

The CEO is found on top of the business strategy in order to reflect the holistic responsibility. The CEO should also help other managers within the box "business strategy" such as the CIO to acquire sufficient tools to do their work. The model only takes into account organizations business and IT strategy despite the many other functions that surely have their own strategies. Broadbent and Kitzis (2004) describes the CIO as the head of the IT department and the CEO as the communicator to other stakeholders.

The reason for this is that IT investments are often intangible and while the CIO sees an IT investment as providing revenue growth by improving the infrastructural capacity. The CEO might see the same event as that they have improved the capability of their business processes by integrating suppliers in the organization. Stakeholders seem to be more interested in the CEO's way of thinking and expressing things (Broadbent & Kitzis, 2004).

The IT managers are supporting management to different departments throughout the organization. The IT manager role and responsibilities are spread from making sure printers work properly to having a support duty, controlling the financial systems in use. Therefore we have created arrows visualizing that they can be found aiding both business and IT strategy.

This model (figure 2-1) represents our view of the CIO role in the context of IT and business strategy. Using IT strategy to reach business strategy goals or vice versa, is also referred to as Strategic alignment. By viewing IT and business strategy as closely related to each other, organizations tend to find better use of IT and therefore better performance gains of IT investments (Broadbent & Kitzis, 2003).

2.2 Strategic Alignment

"*The key to CIO survival is calculating the incoming CEO's understanding and commitment to IT and having a "state of the union" script ready for the CEO to forge a credible and lasting partnership in meeting competitive challenges.*" (Passori, 2006)

This quote by Passori (2006) gives the idea that the most important task of the CIO is making sure that the relationship to the CEO is as good as possible. By looking at figure 2-1, we can see that this same relationship is located at the center of the figure. In other words, the quote by Passori tells us that the CIO must work with understanding the needs and wants of the CEO and by doing this, the IT strategy becomes connected to the business strategy. Working with this connection is working with strategic alignment, according to figure 2-1, this is the most usual CIO task.

Information technology and business activities can not be seen as self-determining, they have to work together and contribute on an operational and strategic level. This is illustrated in figure 2-2 (De Sutters, 2003). The model aims at describing the business towards IT and the alignment between them, with four different domains. The Business strategy should be reflected in the business infrastructure and processes as well as the IT strategy and IT infrastructure. To be able to align the business strategy with the IT strategy the organizations have the opportunity to gain a strategic and competitive advantage (De Sutters, 2003). The business strategy should also be reflected by the IT strategy as part of the functional integration. By using this model as a support for strategic planning, organizations get the opportunity to understand several aspects of their intended path and how to reach the set goals.

This model will serve as an aid to interpret the link between our questions regarding the actual work of the CIO and its implications. The model describes how the business strategy, IT strategy, IT infrastructure and business infrastructure are related and also how to work with aligning these four areas.

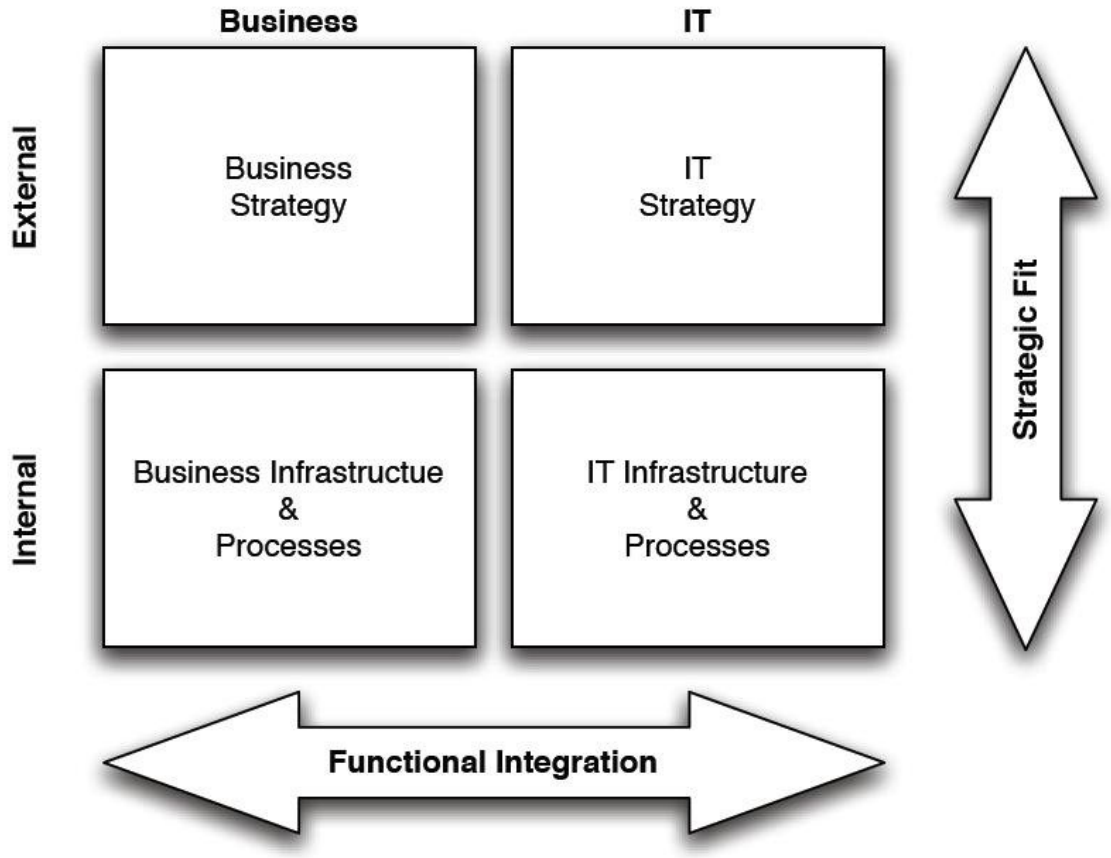

Figure 2-2 - Strategic Alignment Model (De Sutter, 2003, page 411)

With the idea that IT and business strategy should be aligned as in figure 2-2, Organizations should work on who is responsible for what and how. This provides a basis for our discussion on responsibilities and rights.

If the CIO aligns the IT strategy to suit the Business strategy as suggested by De Sutter (2003), which means the CIO is dedicated to solving business problems with IT. Then the support of business objectives becomes the most important function.

The strategic alignment model helps us answer questions regarding the width of responsibility for the CIO as well the possible influence on business strategy. The use of this model as part of our framework helps in our interviews since we are interested in the CIO view of responsibility in different aspects and also, what decides what.

According to figure 2-1, the CIO is the link between the business strategy and IT strategy providing functional integration. This since the CIO is placed between the business and IT strategy aiming to make them understand each other. This same placement can also be made in figure 2-2 where the task of functional integration becomes evident. This means that the CIO is responsible for providing the business with the proper information architecture, data architecture, systems architecture and computer architecture (De Sutter, 2003). This is done by establishing a set of continuously updated plans and goals regarding how information should be available, in what forms, how it should be stored and where in order to best support the business.

The key here is that the IT strategy should reflect the business strategy with the information it provides. If the CIO fails to support the business with the information it needs, credibility will be lost. This is shown in figure 2-3. The only source for credibility for a CIO lies in the ability to deliver results that other executive colleagues appreciate (Broadbent & Kitzis, 2004). What this means is that as responsible for the IT strategy, results reflecting and supporting the business strategy is critical.

By considering this, the severity of the CIO to work as figure 2-1 in between the business and IT strategy becomes much more evident. Without this holistic strategic approach working solely with improving the IT strategy to fit the organization, Broadbent and Kitzis (2004) claims that a CIO cannot be successful in gaining credibility. This is a view that we so far sympathize with. Although credibility of the CIO is not one of our initial research questions, it is important from the aspect that a CIO needs to do what the role implies. As all other managerial positions, credibility is crucial. Model 2-3 helps us understand why the influence might be wider than just on IT. More credibility should lead to increased responsibilities and vice versa, since the initial credibility and responsibility of the CIO is somewhat fixed and may either extend or narrow.

Broadbent and Kitzis (2004) explain the model as an iterative process, which either leads to virtuous cycle or a downward spiral depending on what is delivered. As the new CIO takes place in the organization, initial credibility is received along with resources to deliver results. If the enterprise leadership appreciates the outcomes and results, the CIO will gain credibility and receive gratitude in forms of increased resources and influence. If, on the other hand, the CIO fail to live up to the expectations amongst the executive colleagues, credibility will be lost and the resources will be cut.

Step by step, a CIO starts with some kind of initial credibility. This is how the executive colleagues view the importance of IT and specifically the role of the CIO. In order to achieve the IT strategy goals, the CIO is given a certain amount of resources such as per-

sonnel, money and IT infrastructure. The outcomes of the IT projects carried out under the CIO are measured by other managers, and their attitudes toward the outcome versus the given resources and initial promises are valued as some kind of results. If the CIO fails to live up to the expectations, credibility will be lost. By loosing too much credibility, the role of the CIO will be questioned and the resources will be cut which could easily lead to the failure of future IT projects. Therefore, it is crucial that the CIO delivers results to other managers, satisfying their needs and wants. By doing this, resources will be increased and the view of IT will have change in a positive way. By gaining more resources, the CIO will meet the future better prepared to deliver appreciated results.

Passori (2006) claim that the CIO must find a way to promote IT and business alignment to gain credibility and influence in the organization. Without providing business worth, the CIO will face relegation or replacement.

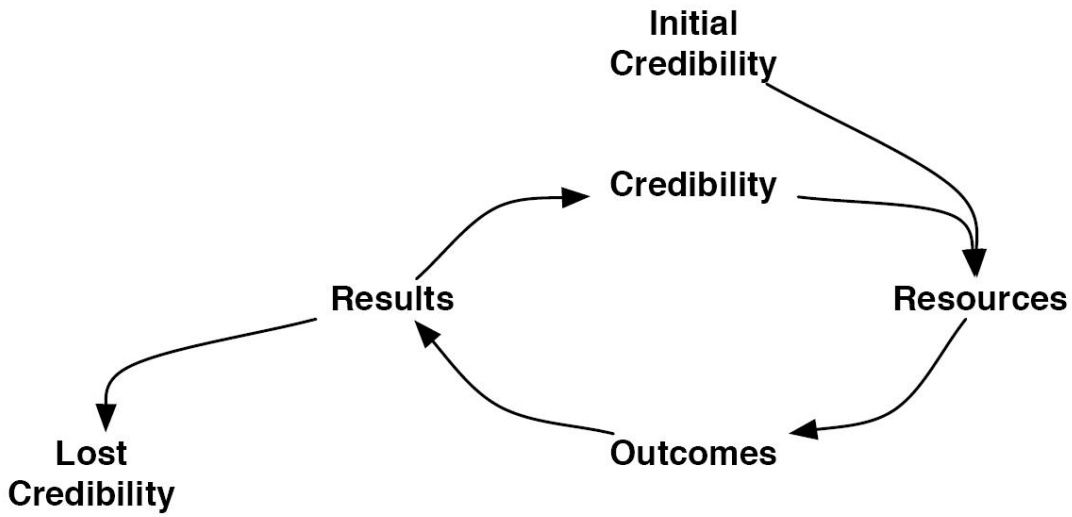

Figure 2-3 - The CIO Credibility Cycle (Broadbent & Kitzis, 2004, page 20)

What this means is that successful IT projects will lead to increased resources for upcoming projects. This is tied to our question about responsibility and rights. How does the CIO have to prove that IT projects are profitable, and how far does the responsibility go.

So, to summarize the relations between figure 2-1, figure 2-2 and figure 2-3. Figure 2-1 begins to describe where the CIO should work and where they should focus their energies, we have placed the CIO in between the business and IT strategy, an image we have gotten from the literature. The CIO is responsible for providing the business with IT solutions suitable for its purpose. With the CIO in between the business and IT strategy, all of the sudden we see that the CIO is responsible for the functional integration according to figure 2-2. Figure 2-2, introduces the functional integration which is supposed to explain what the connection between the IT and business strategy means, that the CIO is responsible for delivering the right data, through the right channels to the right person at the right time. If the CIO succeeds in doing the tasks assigned credibility will be won, however, if the results are not appreciated, the CIO will loose credibility and confidence. Figure 2-3 then explains how credibility is gained or lost and what this mean to upcoming projects and investments.

Credibility for the CIO is very important due to the productivity paradox. The productivity paradox being the difficulties of proving the benefits gained by IT since the gains and benefits are mainly of an intangible character (Wikipedia, 2006). It could also be hard to prove the monetary gains of IT since investments in IT often require some sort of costs such as user training, which are hard to prove as profitable. The time aspect here is important since it is not likely that someone can predict the time needed before IT investments starts to increase efficiency. However, if the CIO succeeds in delivering results to the executive colleagues within given budget and timeframe, credibility will be gained and IT is not as likely to be questioned in the future.

3 Method

The thesis will be of a descriptive normative approach where data is collected from multiple sources such as literature, Internet and interviews providing information for us to create knowledge about what a Chief Information Officer can do and whether there is a difference in tasks between organizations.

Since we have interviewed two CIO's we will not be able to find general conclusions that apply to all organizations, but rather specific conclusions that may describe common problems facing several organization with similar structure. The organizations that we interview are large and our focus is on large organizations throughout this thesis. The reason for this is that we want to make sure that the role CIO is represented in such a way that it is possible to compare the role between different organizations. In smaller companies this role may be represented, but is often seen as combined with other roles, or not represented at all.

In our interviews, we have chosen not to use IT companies since we are interested in how the CIO can work in organizations where the IT knowledge is focused in the IT department.

3.1 Data Collection

To collect high-quality data, we have searched for articles and books with search phrases like:

- IT management
- CIO
- CEO
- CIO Responsibilities
- Strategic alignment
- IT strategy

The results were rated mainly after their relevance regarding when they were written. We have used the information to build an understanding on the topic, but also to compare what is written about the CIO and tasks and our results from the interviews.

We needed to understand and somehow define terms like IT manager, CIO and CEO before we collected any primary data. This was done mainly in order for us to gain understanding of the big picture but also to help readers understand the concepts discussed.

3.2 Sources of Information

The information used in this thesis comes from different sources, this because we aim at trying to provide knowledge representing different aspects of the subject. We have chosen to conduct in-depth interviews in order to gather first hand information representing the CIO point of view. And we have used literature and internet to gather information to base our research questions on and also to use as part of our analysis when we compare our interviews with what has been said earlier.

With the qualitative interviews we have used an interview guide as a ground for discussion. The interviews are aimed at finding new knowledge that we would not have found only by reading or using a survey.

3.2.1 Interviews

We have chosen to use a qualitative method with in-depth interviews in order to get perceived beliefs and opinions (Jacobsen, 1993) from our respondents. The decision why we preferred the qualitative method was for the reason that the in depth interview will enable us to use open questions and hope to get in depth answers on which we can draw conclusions to base our findings upon. It also gives us the possibility to find information interesting to our study that we would miss out on because of our initial awareness.

Before the interviews we constructed an interview guide to have as a checklist with our questions for making the interview structure the same in both meetings. This interview method has many benefits as we can put a lot of time in working with the right and concrete questions, and to compare them for getting our problems answered. It will also give us the opportunity to use follow up questions when new aspects can appear (Jacobsen, 1993).

The interviews were recorded so that we had the raw empirics saved for our analysis. During the interviews we focused on understanding the information we got and make sure to ask follow up questions to gain a better understanding of our respondents. Since the interviews were recorded we have had the opportunity to analyze the answers afterwards.

3.2.1.1 Interview Guide

The interview guide is a checklist with the questions we have compiled. The questions are compiled from the perspective of our research and the problem specified. The reason for using an interview guide is (as described above) that we want to make sure we have the same initial questions in both interviews.

3.2.1.2 Questions

In order to retrieve the best value from the interviews, with good quality, we constructed the interview guide out of our initial research questions. These questions were then specified further:

What are the responsibilities and rights of the Chief Information Officer?

To see the value a CIO can have for the organization, regarding where the specific position is shown in the hierarchy, and the tasks a CIO have considered from the demand an organization have of the position.

Q1 How is your role represented in the board of directors?

Q2 What responsibilities do you have to:

- IT department?
- Company management?

Q3 How is IT profitability revealed?

How far does the responsibility of the Chief Information Officer go?

To see how far off the CIO's tasks and its credibility goes, outside and inside the regular IT responsibilities.

Q4 How big is your influence outside IT questions?

Q5 How big is your influence regarding IT questions?

What is the Chief Information Officers primary function?

What the organizations we are interviewing would like their CIO to achieve, from the perspective as manager of the information technology and as the position serving as an ambassador for strategic alignment.

Q6 What does your role consist of, regarding the operational vs. strategic

Q7 What in your opinion is the most important for a CIO task?

Q8 What is the IT department's most important issue?

What can a Chief Information Officer provide for business strategy?

To see the value of IT, especially from the point how the alignment works between IT strategy and business strategy.

Q9 How do you see IT as a competitive tool?

Q10 How does the IT department support the company strategy?

Q11 How does the cooperation work between IT department and the business for reaching the organizational goals?

Q12 How and when will the IT strategy become affected from the business strategic adjustments?

3.3 Past Research

When analyzing what has been written earlier we have focused on literature written about the IT area. The publications used in the thesis will provide an image about what the CIO should do and where in the organization the CIO should be positioned. Before writing the interview guide, literature and internet was studied to assure the questions where right.

Our focus on the past research has been on what the CIO is supposed to do and also how IT strategy is linked to business strategy.

3.3.1 Literature

The method for using the right literature to respond on our problems is in a way defined under the data collection headline, although the information there was more focus on describing the job positions we identified. Even though that information were for a position describing purpose, the problem definitions also became clearer, especially in the part of where the CIO was defined. Here we were informed on the enterprise demands to the CIO and the different rights and responsibilities that a CIO should focus on. A lot of information was describing the alignment between business objectives and IT, but not so clear on were the CIO comes in and its primary purpose.

Though there is a lot of information describing the importance of the CIO and the job position, there were several questions that were left unanswered, and did not give a clear definition on what result that should come from the post. Here we are going to fill in that information from the interview data.

3.3.2 Internet

From the Internet as information source, we were focusing more on retrieving time essential information on today's CIO. With the intention for collecting the newest aspect on the job position, since some of the literature were a few years old and could give us wrong insight on today's CIO and its function.

Internet has been used as a supporting tool for our secondary data analysis, meaning that the literature and e-books we have found are seen as more credible than most internet sources.

3.4 Weaknesses

The interviews only admit general answers with us as interpreters and the respondents as opinion makers. This qualitative method could be strengthened with quantitative research. If there was more time, the thesis would have been complemented with a quantitative research method. The selection of only two respondents (that we have not been able to follow up after the analysis) is also limiting the credibility of our results.

3.5 Analyzing the Empirical Findings

Our theoretical framework will be used while analyzing the results from our in depth interviews. As stated in the research questions, we are interested in finding out whether there is a connection between what the CIO does regarding IT and business. If the study shows that there is a direct link between what business benefits are created by the CIO as stated by Broadbent & Kitzis (2003). Then we have support for figure 2-1, which show that a CIO should be the link between the IT strategy and business strategy. Aiding in the work to fill the gap illustrated in figure 2-2, called functional integration (De Sutter, 2003).

However, if the CIO fails to fill the gap by creating functional integration, credibility will be lost and the influence will be restrained according to figure 2-3.

What this means is that we have found a relationship between the three models that can be used for analyzing our empirical findings. What this relationship says is; figure 2-1 with the location of the CIO can have a direct connection to the perceived credibility and resources invested in IT. If the CIO is positioned in the middle as shown in figure 2-1, then the functional integration gap is filled and credibility is hopefully increased. The empirics we gather from our respondents will be used for creating models similar to 2-1, 2-2 and 2-3 but with the respondent focus instead of the general idea of a CIO.

In order to provide applicable knowledge, both the respondents and the organization they work in will be presented.

4 Empirical findings

We have conducted two interviews in order to attain information helping us to answer our research questions. The interview questions can be found under heading 3.2.1.2. Since the interviews were held as conversations rather than structured questioning, the information given will first be presented as a draft not containing the questions which the respondents answered.

The headings 4.1-4-2 are based on the interviews, unless there is a reference to an external source.

4.1 Posten AB

The first interview was conducted at Posten AB with their CIO Per-Inge Ohlsson. This interview gave us much more than our initial questions would have answered since the respondent was well aware of our topic and helped us in the discussion. We got information regarding questions we had not yet considered although highly interesting for our research purpose.

4.1.1 Background

Posten AB has over 35,000 employees. They are a distribution organization with four major areas of business (Posten.se, 2006):

- Mail distribution,
- Newspaper distribution,
- Postal service and
- Concept solution

The IT department is responsible for aiding the business by providing solutions helping them to achieve their goals. The CIO is the highest hierarchal manager at Posten AB regarding the IT department (P-I. Ohlsson, personal communication, 2006-04-03).

The IT budget at Posten AB for 2006 is 1,150,000,000 SEK, which corresponds to 5.3 percent of the overall turnover for Posten AB. The goal is that the IT budget will be equivalent to 4 percent. Further information about the organization can be found in appendix A, and appendix B. Appendix A is a chart representing the CIO within the IT department and his nearest manager, the CEO which he also reports to. Appendix B is a chart describing the different group functions at Posten AB in the group executive board, where the CIO can be found.

The respondent Per-Inge Ohlsson who will later be referred to as respondent A has been working with IT for over 30 years. He has had international experience during several of these years and a wide spread of roles and responsibilities. During the past 15 years, respondent A has worked with IT management and strategic questions concerning IT, most recent in the pharmaceutical industry. Respondent A has been working at Posten as a CIO since 2003.

4.1.2 Role

The CIO role at Posten AB consists of two roles. One as the CIO with the strategic responsibility for IT where respondent A reports to the CEO, and one where respondent A is represented as one of the group functions. These roles often go hand in hand with IT related issues. In order to place respondent A within Posten AB, an organization chart is presented (figure 4-1).

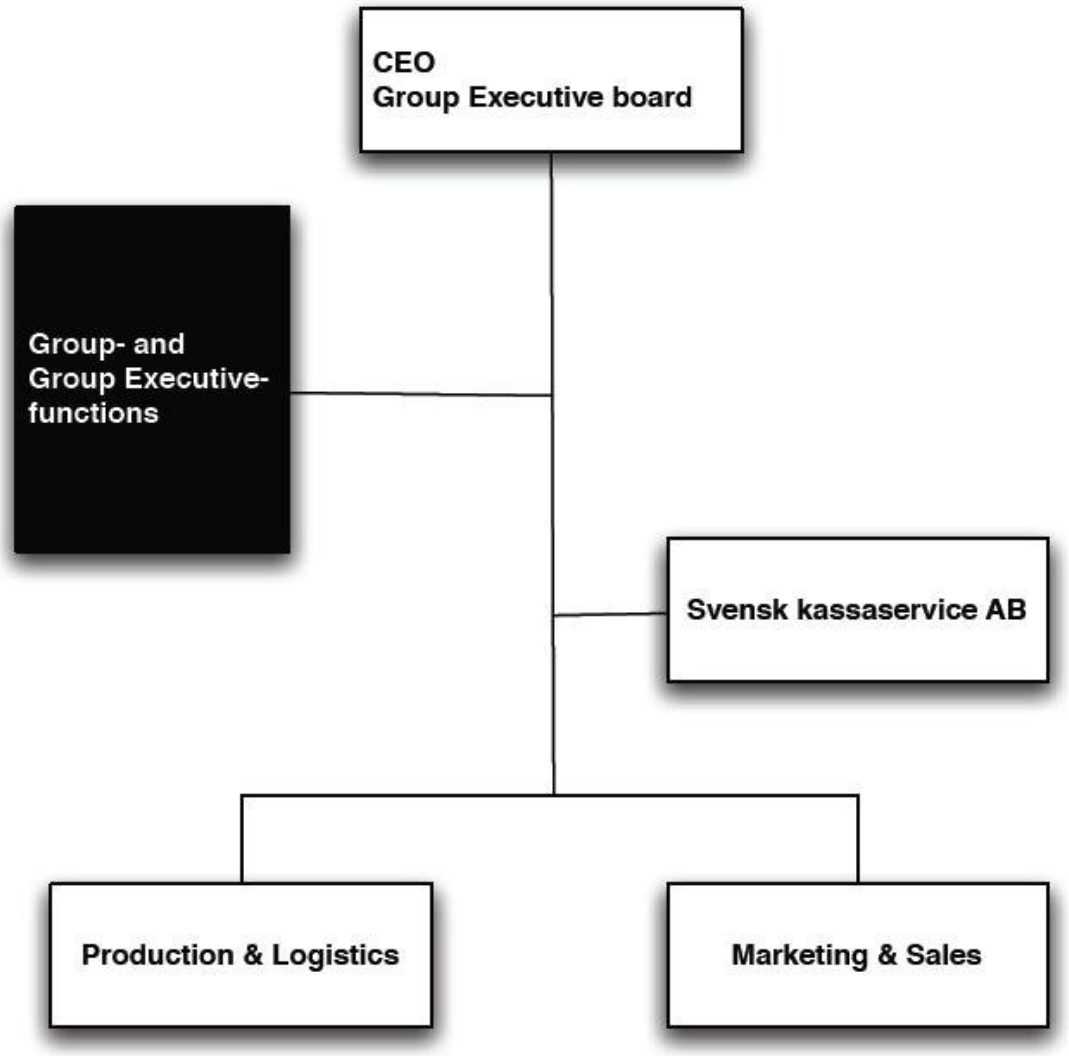

Figure 4-1, Organization chart, Posten AB (Posten.se, N/A)

To decide the depth of the strategic importance of IT questions at Posten, respondent a makes a comparison with banks where IT questions are top priority since nothing they do can malfunction. At Posten however, strategic work is carried out in regards of IT, but it is not a driving force of business development in the same way it can be in other markets. The IT strategy is a natural development of the business strategy. However, the choice to have the CIO represented as a group function is a well aware decision. This based on the fact that the business strategy and IT strategy affect each other. This has not always been the case since respondent A is the first CIO to be represented as a group function. Earlier the CIO reported to the Chief of Economy and Finance.

4.1.3 Strategic work

The CIO role as strategic responsible for IT contribution to business development works as a rolling schedule where the strategy is continuously improved and developed. The past years have been focused on the strategic work and the balance between strategic and operative work has been hard to find in the role. As an aid to presenting and making the strategies visible, respondent A and Posten AB works with balanced scorecards, benchmarking and scenario planning. The strategic planning is carried out from a multi functional perspective where environmental factors such as deregulation of governmental monopolies and international competition are taken into account.

The respondent also noted that they had formerly worked with a system owner perspective where responsibilities where assigned to different sub systems. This way of working has proven to be somewhat of a pitfall where costs easily increase unpredictably. A modernized view of this is to share the responsibility of the system are presently being worked out. Nowadays the information need is viewed as the most important function of the IT department. With this perception it is easier to find and control costs and have a rational view of that the customer really wants. (Posten AB is Posten IT's main customer.)

4.1.4 Primary concerns

The currently most important strategic questions at Posten IT today is to change the IT governance towards focusing on letting the information need decide the development of the information systems in contrast to the outdated system ownership model. Respondent A is responsible for this strategic work.

The second most important question that is continuously reworked is that concerning the IT-system architecture, this is done with a long time frame and the important strategic aspect is how Posten wants their systems architecture in the future. It is top priority to make sure that Posten are ready to meet the future demands to be able to compete on the future market. This is done by applying the previously mentioned methods benchmarking and balanced scorecard.

The group executive's demand on IT and CIO is that they should deliver profitability to the owners in respect to the goals that has been set. The five goals that both Posten AB and Posten IT work towards are (Posten AB årsredovisning, 2005):

- Profitability
- Cost efficiency
- Competitiveness
- Confidence capital
- Employees

The current projects carried out at Posten contribute to these goals. They are working with monthly follow-ups to visualize profitability and increased efficiency, with for example the balanced scorecard. Another example of how business and IT strategy are closely linked is the focus on the sales organization and how IT helps to support the sales personnel. All sales must be presented with well substantiated facts from the IT systems, at the same time that the sales personnel has a responsibility to report back to the system about the sale,

budget, customers, frequency of visits etc. It is a demand from the organization that the focus on sales must be clear and evident. This affects the IT department's requirements to provide systems to initiate, follow up, and measure the performance from sales. This information is put together to form important decision grounds for upcoming budgets.

4.2 Jönköping University

The second interview was conducted at Jönköping University with the highest hierarchal IT manager, Stefan Henriksson. Stefan will later be referred to as respondent B. Although respondent B prefers to be called IT manager, he definitely fulfills the requirements for a CIO according to our definition. He is the most senior executive of the IT department and his main tasks consist of finding and fulfilling information needs at Jönköping University. He is the highest hierarchal manager and is therefore the single most influential person regarding IT. Jönköping University consists of five separate corporations, four universities and university services where respondent B is currently employed.

"University Services is responsible for local supplies, the joint library and the management and services to the Foundation and the four schools." (hj.se, 2006)

With this in mind, they are aiding the universities to fulfill their visions. Jönköping University work on what they call, "four pillars of development" (hj.se). The four pillars of development are:

- Focusing on selected areas.
- Cooperation with the community.
- International orientation.
- Building a strong and attractive academic environment.

4.2.1 Background

Respondent B has had his current employment since autumn 2005. He has got a background as an administrator at Posten, working with organizational and personnel questions. At Posten he also worked as a middle manager at the IT department. He got transferred to Jönköping where he worked as a project manager at Posten before he became responsible IT manger to the cashiers. After Posten started to re organize the IT to form a unified IT department he became local manager for Jönköping and the eastern Swedish region. At this time he was also represented in a central management group. After Posten started outsourcing parts of their IT organization to IBM he got an employment there as the local manager and worked there until he started his present job at University Services (S. Henriksson, personal communication, 2006-04-27).

He has taken courses in Business administration to form a degree.

4.2.2 Role

University services, where respondent B is employed are responsible for the common IT resources. Examples of common IT resources are the infrastructure, common servers and systems. A common system is defined as a system that is used by three or more of the four universities. Every university has its own IT coordinator that has an ordering function to-

wards University services and therefore respondent B. The universities are both ordering and performing organizations. The member's work consists of budgeting and coordinating the IT resources that are perceived to be common. When working with bigger projects additional funds can be admitted. Respondent B is responsible for IT services, a subordinate function to University services, see appendix D.

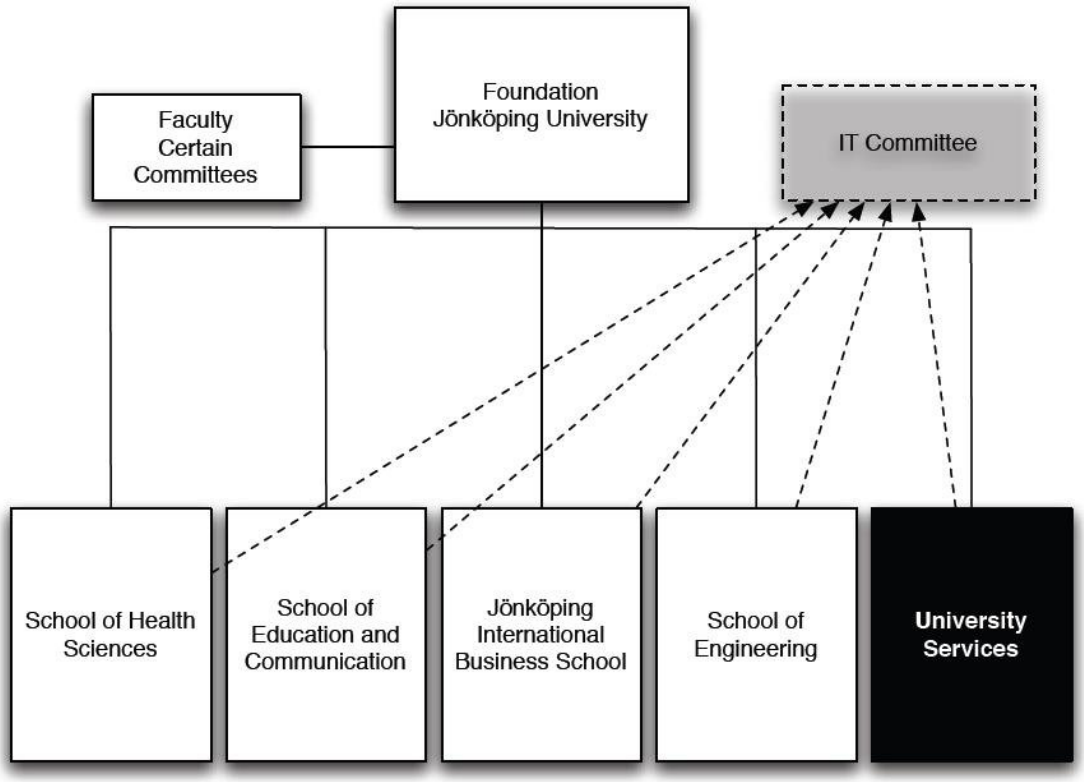

Figure 4-2, Organization chart, Jönköping University (hj.se, 2006)

As the IT manager on University services, the respondent is represented in the IT committee where the different unit mangers are present. Respondent B has got responsibility for common infrastructure and systems concerning IT. He is also responsible for the personnel at IT services.

Respondent B experiences a restrained influence outside IT. The explanation to this is that the university culture and the academic perspective make it hard to work in questions that are not of an IT character. Regarding IT questions, respondent B perceives to have a very large influence. He also point out that the influence might even be too large in relation to the actual role he has. Some questions should according to the respondent be moved to the people that are more closely linked to the business.

4.2.3 Strategic Work

The IT organization consists of an IT committee that is the highest ruling authority for the IT department. In the IT committee, all four universities are represented as well as University Services. Appendix C shows how Jönköping University is organized with the five companies. The IT committee consists of high managers, not the CEO, but the chief of education or the administrative director. University services do not have the right to vote, but they are represented by respondent B. Respondent B report to the CEO of University ser-

vices. In the IT committee the activity plans for each juridical unit are discussed, and based on this a budget proposal over IT is constructed. The budget works, so that each unit pays an amount based on how many workstations they have. The number of workstations therefore works as a cost divider between the companies. The IT committee also treats questions of strategic character that are presented by each individual company.

The strategy is audited every other year. The IT committee decides what to work with. Respondent B believes that certain questions are hard to treat since there is somewhat of a distance between the business and IT. These due to the fact that the IT committee consists of representatives from the four universities and the questions dealt with are mainly of an IT character, the respondent feel that this might be the wrong direction. Even if it is encouraged that IT questions come from below in the organization, (from IT coordinators, teachers and students) some questions of a strategic character should involve IT. This is difficult in an organization that looks like Jönköping University due to its structure.

4.2.4 Primary concerns

The most important issue to work with is security according to respondent B. The executive colleagues consider that smooth operations are the most important aspect. IT is in someway considered to provide competitive advantage and Jönköping University has among other things, most workstations per student. There is also a wireless network for student, this since they are trying to work pro-active and please future demands.

Since each university is a legal unit, decisions can not always be taken in a rational way. I some cases, not even the principal has authority to control the decisions. This leads to a built in inertia in the coordination of IT, which is IT services primary task. This is also reflected in decisions of a more strategic character that could or should involve IT questions. To work together demands that all affected parts believes in the proposed direction. Regarding this question, the respondent feels that he should have a superior that is more closely linked to the business strategy and board of directors.

Profitability of IT is measured for example by benchmarking with other universities. This was done 2003, the measurements where of different character, such as financial, pleased customer index, workstations per student etc.

4.3 Comparison

In this section the respondents will be compared based on their answers with emphasis on our initial research questions. Since the respondents' works in organizations that differ from each other in many ways, the comparison will have its starting point from the CIO perspective and the benefits achieved by appointing a CIO.

4.3.1 Tasks and Responsibilities

The tasks and responsibilities of respondent A and B differ in many ways due to some major differences in their actual roles. While respondent A focuses solely on strategic work, respondent B is more involved in solving every day tasks and maintenance work. Although respondent B has changed his tasks to become more of a strategic resource, he perceives to have a very limited influence regarding business strategy. Respondent A however, is represented in the group executive board and is involved not only in questions regarding the IT department, but also in the alignment of business objectives and goals. His know-how in

the IT field is important to the end result of the organization. Respondent B experiences that some of the questions that he has to deal with are of strategic importance and that those questions should be answered before they reach his desk. He argues that in order to be efficient in the alignment of IT and business objectives there could be use of a role that is represented at a higher hierarchy level in the organization. Today the different business objectives in relation to IT are solved solely on tacit knowledge and know-how, but it is not an expressed role in the organization. A major difference between respondent A and B is the creating and revision of the IT strategy. Respondent A is part of the top management and forms the IT strategy based on the business strategy, i.e. a top-down approach. Respondent B has the freedom to create and revise the strategy in his own way. Respondent B has chosen to do this with the help from the coordinators at the different faculties, i.e. a bottom-up approach. Respondent A feels that he can partake in strategic work and be a part of the implementation from a strategic perspective while respondent B feels that he does not have the optimal conditions to work solely strategic. He sees this as a problem because when he gets involved in operative work it will affect the strategic work that is of significant importance.

To conclude, respondent A is a strategic IT force, represented in the group executive board and the highest hierarchal manager at the IT department at Posten AB. Respondent B, is represented in the IT committee, but this is a committee dealing only with IT related questions. Respondent B is also the highest hierarchal IT manager at Jönköping University. This has implications in their actual work since respondent A is involved in the overall business strategy work and therefore more capable of taking decisions regarding IT in relation to business strategy while respondent B only influence IT decisions. They both feel that they have a great deal of influence in IT related issues. However, respondent A feels that his influence outside of IT is fat least fairly good while respondent B feels that it is small.

4.3.2 Strategic alignment

The strategic alignment between IT and Business strategy is much more evident in the case with respondent A. Respondent A works solely with strategic questions both business and IT while respondent B is only focused on the IT strategy. Once again, respondent A and his relationship to the group executive board provides him with knowledge and influence across boarders, therefore his job is more focused on aligning the IT strategy with the business strategy than respondent B. Respondent B does not have the same role in the organization, he is merely supposed to be the head representative of IT.

If putting our finding in the CIO relationship model (Figure 2-1), we can see a clear distinction between the two respondent in regards of their strategic influence and responsibilities. These finding are visualized in figure 4-1 where we see Respondent A, being the link between IT strategy and business strategy, while Respondent B is found far off to the left representing only the IT strategy.

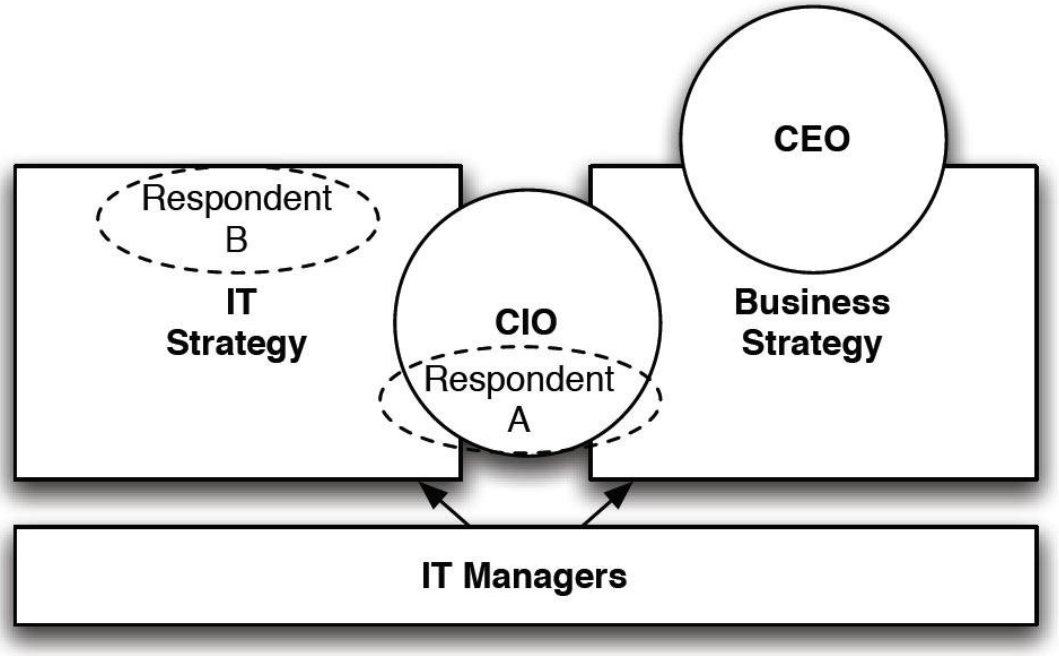

Figure 4-3, Respondent A, and respondent B in the CIO Relationship model

When looking at Figure 2-2, we find that respondent B is more focused on the functional integration than on the strategic fit. This based on the responses insinuating a focus on infrastructure and support. Respondent B and his work is more of the IT infrastructural character. The infrastructure and IT strategy are linked together, but most often the current IT infrastructure seems to control the direction of the IT strategy. Respondent A however, is only concerned on working with the functional integration aligning the IT and business strategy. Respondent A certainly have knowledge about the IT infrastructure but his role as being the responsible for the IT strategy forces him to consider the IT strategy in respect of the overall business strategy.

4.3.3 Roles

The roles of respondent A and respondent B are different from one another despite their position in the organization. Respondent A has influence in both IT and business strategy which make him more of a strategic resource than respondent B who is responsible only for the IT. The role that respondent A has been invested with as both the CIO and one of the members in the group executive board allows him to get first hand information on what is happening in the organization outside of the IT department. This allows him to work proactively with upcoming questions and align the IT strategy to reflect the business strategy. Respondent B is the top manager at the IT department, and his role is invested with a lot of deciding rights and authority regarding IT, but only IT.

If we look at figure 4-1 again, Respondent A is situated in between the business and IT strategy, as the link between. His role as the CIO is never independent from his role as member of the group executive board and vice versa. Respondent B is situated far to the left in the IT strategy box. Although IT strategy has an impact on business strategy, it is not part of his role to make sure that these to strategies are aligned.

4.3.4 Primary function

The comparison of respondent A and B and their primary function as CIO's, we must conclude they have different roles regarding how the organization is working. As Respondent A say his primary function is to be responsible for the strategic change of IT governance of the information systems, with the need of information as the resolution of system development. With respondent B declare his major function more operational, with security and IT operations running steady and uninterrupted as his major liability. Respondent A delivers profitability from the goals that the organization has set, with balance scorecard and thru benchmarking. Comparing with respondent B that declares they measure profitability with benchmarking with other universities and thru satisfied clients. Another main function from respondent A is the support from IT to the sales department. If we compare that to what the respondent B have as the support function it would be accurate to the student's satisfaction and help of information need and IT functionality.

5 Analysis

In this section the respondents will be compared and analyzed based on their answers with emphasis on our initial research questions. Since the respondents' works in organizations that differ from each other in many ways, the comparison will have its starting point from the CIO perspective and the benefits achieved by appointing a CIO.

5.1 Tasks and Responsibilities

Broadbent and Kitzis (2004) have developed a guideline for CIO's to follow. To lead, know the enterprise and the competitive surroundings, have a vision of how IT contribute to business value, identify business needs and strategies, to unit business and IT strategy, develop a high-quality team, and to manage the risks with IT through the organization.

5.1.1 Analyzing tasks and Responsibilities

Respondent A are constantly measuring and monitoring IT within the organization through KPI´s (Key Performance Indicators) and Balanced Scorecard. This makes the benefits of IT visible within the organization and it also helps with focusing on the right tasks. Through the help of above mentioned means, the strategy can be constantly revised and improved. IT is monitored carefully for several reasons according to respondent A.

- IT can sometimes be seen solely as a cost if it is not measured correctly and carefully.
- It is important to show employees the progress within projects, visualizing the advantages makes it easier to make correct assumptions and decisions in future IT investments.
- Responsibilities and progress are easy to follow when Balanced Scorecard are used.
- Future budgets are easier to justify with the proper measurements of IT contribution.
- Balanced scorecard does not only focus on IT. The balanced scorecard concerns several aspects, IT included. Therefore it becomes a visual aid for displaying not only the tangible benefits of investing in IT, but also it provides an idea of the synergies concerning IT investments and developments.
- When delivering proper results and making them visible, the CIO and IT department can gain credibility and hopefully acquire tools and trust to make future IT investments more probable to receive positive receptions (figure 2-3).
- IT budget is set from a top down approach where the fulfillment of business goals determines how much money that has to be spent on IT to meet those goals.

Respondent B has a somewhat different approach in his everyday work. He has a wish to work more strategic, but has the functionality of the computer systems as a measure of IT contribution and success. To respondent B, the functionality of for example the mail system or the response time to correct an occurred failure in a server is a measurement of success. This makes respondent B to be in a reactive mode and with less focus on strategy.

The budget for IT is also more fixed and costs are matched to the budget rather than letting the need steer the budgeting. When respondent

- IT is measured through the functionality of the systems in use and from continuous surveys to students and personnel.
- The answers from the surveys are measures of success and work as a roadmap to future budgets and plans.

5.2 Aligning IT with business objectives

According to Delisi, Danielson and Posner (2002) the alignment between IT and business objectives is the primary task of the CIO. In this section the empirical findings will be compared and analyzed in contrast to the literature.

5.2.1 Analysis of the Strategic Alignment

Posten has determined that IT is of such significant importance that the CIO is represented in the Group Executive Board. Within the board, questions concerning the overall business strategy are discussed and decisions are made. It is a clear advantage that the CIO is represented here for two reasons: It gives the CIO necessary knowledge of present business and projects which may more or less involve IT, reason number two is that the CIO can provide know-how to projects which at first may not seem like IT-related, but may in fact influence the overall IT and/or business strategy. As can be seen in the model in figure 5-1, the work with developing an IT strategy involves the Group Executive Board, where both the CIO and CEO are represented. This is a strategic and conscious choice because respondent A sees IT as strategic, hence they want to closely align IT and business strategy. This is a top-down approach, but does not exclude the influence from managers and co-workers within the IT department. It is seen as an advantage that the CIO has a solely strategic role and can focus on alignment of business and IT. The IT department has managers in different areas (see appendix A) that carries out the plans made in the Group Executive Board or by respondent A himself. This also supports our model (figure 4-3) where the CIO is placed between the IT department and business department.

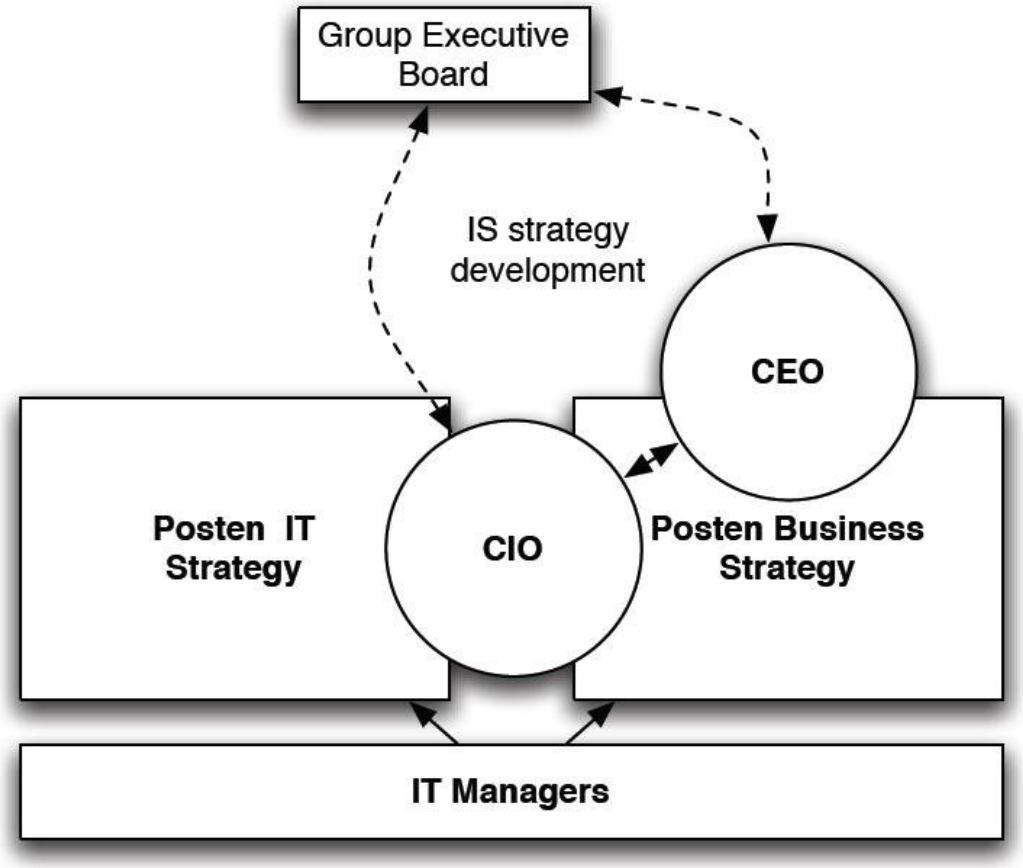

Figure 5-1, IS Strategy Development at Posten AB

Posten has a clear and distinctive role for the CIO that not all companies have. He works solely strategic and has several levels of command that not all companies can afford or think they can afford. This is shown in figure 5-1, where we graphically show that the IT strategy or IS strategy development is stated after a cooperation between the IT department represented by the CIO, the business department represented by the CEO and the Group executive board which comes with influence from several different departments creating a mixture of knowledge and needs. They have embraced the thought that IT can create competitive advantage and IT is not seen solely as a support function but as a creative force not to be overlooked. This may be because of the industry in which Posten works but also shows that Posten has a well thought through IT strategy with high hierarchal influence. Although respondent A points out that IT does not have such a distinct competitive edge that it has for like for example banks, they still consider IT to be a focus area that has to support the information needed within the organization and to its environment in an effective and efficient way

Respondent B on the other hand, have a different strategic role when aligning the IT strategy towards the business objectives, example of information flow and the ability to make competitiveness with the help of technology. He is represented in the IT committee, which is the highest authority for IT decisions, where he not have the right to vote but have a strategic input on IT questions for business benefits and he perceives to have a high level of not only involvement but also influence.

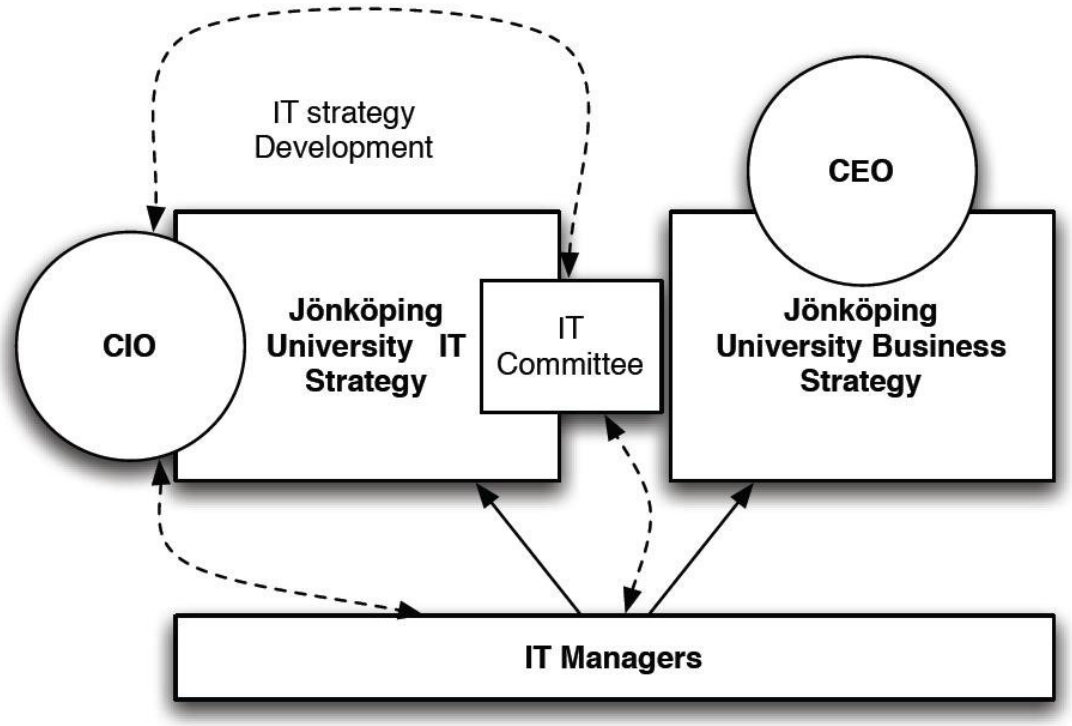

Figure 5-2, IT Strategy Development at Jönköping University

The strategic role of respondent B, shown here in figure 5-2, where the IT committee makes decisions on which IT strategy that has to be approached. As we declared earlier respondent B is represented in the IT committee. From there it is up to respondent B to take the output from the committee and develop the IT strategy from an organizational perspective. The IT committee is represented by high managers in order to see the strategy in a more holistic business view. After the IT strategy is formulated to meet the needs of the shareholders represented in the committee, the strategy is rolled out to IT managers at the different schools. The IT strategy in this case as shown in figure 5-2, is written and controlled by in the first hand the IT committee with influence from the CIO in collaboration with local IT managers. This approach gives Respondent B little chance to successfully align IT strategy with overall business strategy since the input he gets is more or less only based on IT questions.

5.3 Roles

The role CIO is in many cases defined beforehand by the organization the CIO is supposed to support. Large amount of the researched literature describes the role itself as focusing on specific tasks, which we describe in theoretical framework. However, the role must be customized to fit the organization they are working in. Our empirical findings for the role CIO shows variations from both the respondents and the literature. Therefore we will compare and analyze the overall role of the CIO and the influence on both IT and business strategies.

5.3.1 Analyzing the CIO Role

When analyzing the role of CIO from our interviews and from literature, we have found that respondent A carries far more strategic responsibilities than respondent B. Not only due to the fact that respondent A is a member of the group executive board, but also due to the many layers of managers beneath him. The focus of his role at Posten has shifted. Before Posten appointed their first CIO, they had a decentralized IT structure with middle managers and no real control of where they were going, which led to no one was responsible for the overall IT strategy. As the overall literature we have studied regarding the CIO role, it is the CIO's function and role to be the connection between the business and the information technology. This can be different regarding organization. However, the CIO role needs some connection to the executive board or some kind of responsibly group for business strategy, this for taking on the changes and strategies on daily bases and the upcoming actions that takes place for the organization. As we mentioned earlier, figure 4-3 where we can see how respondent A's role is closer to the business strategy then respondent B is. We can also put their roles in the model of figure 5-4 where respondent B is more in the circle with traditional responsibilities as IT manager, when the expanded role in the line circle is more related to respondent A's duty.

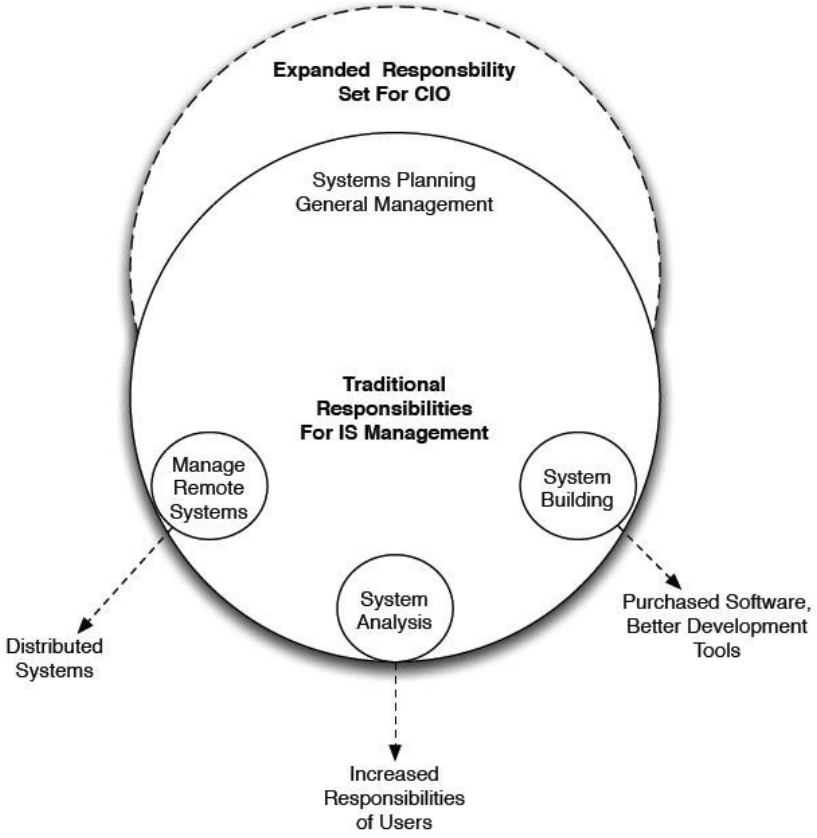

Figure 5-3, Traditional Responsibilities Being "Nibbled Away" from Systems Executives (McNurlin & Sprague, 1998, page 35)

The figure 5-4 is from McNurlin & Sprague research in "Information systems Management in Practice" where they describe the role of CIO is expanding and moving away from the traditional IT operational work, and aligning more with business strategy to achieve a more

holistic view of the organization and have a bigger influence on the business. In addition to use IT as the tool of achieving more efficient solutions, both from the business perspective and for achieving benefits both economical and as competitiveness from IT. They describe the CIO role as more customer related when IT reveals a more "front office" role (McNurlin & Sprague, 1998). This is what respondent A's company is trying to fulfill with the CIO role, as we said earlier Posten AB is Posten IT's main customer but according to our findings in the interview, he also has extensive knowledge about the end customer and the market. Meaning that the organization has strategic IT expertise in the group executive board since IT is facing a more competitive role in the organization.

What respondent B thought as a solution for him, could be to have a more "strategic CIO", which takes the strategic responsibility of IT in the organization environment, with respondent B reporting to him/her. As mentioned, the role has to be customized to fit the environment, and from respondent B's perspective the CIO role today has been designed for the organization without having respondent B as an influence on business strategy. In order to give respondent B a more strategic IT role, the organization must go through a couple of changes to match the wanted end results.

Analyzing the role CIO we consider how the organization is structured and its purpose, in particular when our respondent's organizations differ from each other. The company of respondent A having a CIO that is a member of the group executive board, with a lot of influence both IT related and from a business perspective. Comparing to respondent B with the role CIO more related on IT functionality, with IT operations as his responsibility. The CIO itself is different from how the business is, to what purpose the IT has for the business, and the demand of IT as a strategic function in making business easier and more competitive.

5.4 Primary function

*"The appropriate focus of top management is on above-the-line issues that have the greatest impact on the future success of the organization (*Kaplan & Norton, 2001, p.8)."

5.4.1 Analyzing the Primary Function of a CIO

The primary function of a CIO can differ widely, when speaking about a primary function one could argue that it is closely related to the focus of the organization, and how they view IT. Schubert (2004) describes a focus called "management by means" which basically states that the managers, in this case the CIO has a set of resources or means to get results. After they have gotten results, they measure how well they did. This is basically what respondent B is doing. Every year a budget is set and the costs are divided between the four schools. With this budget, the CIO has to create the best possible solutions. Best possible solution being to meet the demands of all stakeholders which includes students, professors, investors and administrators. Although not all stakeholders share the same opinion on what has to be done, it is the CIO's responsibility to analyze the risks and possible benefits from different solution and at the same time keep budget. Since they work with a constrained budget, they have made the choice to try to keep the systems running as smooth as possible as their main concern. Therefore it is respondent B's primary function to make sure that they have adequate resources to reach that goal and measure how well they are doing. By doing this, the customer's stays satisfied and the CIO credibility is constant. Sometimes respondent B gets increased resources. This is when he exceeds the expectations and there-

fore gains credibility (figure 2-3). By continuously exceeding expectations more credibility and resources are gained and the focus can change from being more operative to become more strategic. This is the case today, respondent B is trying to change his focus in order to become more of a strategic resource. In order to do this, he must first ensure the credibility of his work and that the benefits the stakeholders gain from his actions are visible.

Another focus Schubert (2004) discusses is when organizations become more result driven. This focus is more in line with respondent A. They have set the measurements and KPI´s and aim at reaching them with the help of their guide, the balanced scorecard. When working with developing the IT strategy and also the business strategy. The alignment between becomes more evident. As seen in figure 4-3, our respondents have different responsibilities. But also focuses, while respondent A focuses at reaching the IT departments goals, respondent B has responsibility over the IT as well as the business. Therefore the focus shifts to try to align the IT strategy in order to help reaching the business goals. The only way for respondent A to gain credibility in his role as the CIO is to make sure his executive colleagues are pleased with the services he provides. A problem concerned with this focus is that IT is working to meet a set of pre-determined numbers instead of delivering functionality (Schubert, 2004).

5.5 Conclusion

Our conclusions are based on what we have found in the literature combined with our interview findings. We have found figures explaining how a CIO can gain influence by delivering results and we have found some differences in what our respondent's main concerns and roles are. We strongly believe based on our findings that different organizations need different support from IT and therefore also different types of CIO's. This is obvious based on our results. Both organizations are working smoothly and are profitable, therefore there is no urgent need to change IT responsibilities. However, if someone still would like to gain influence both formal and informal and place IT more as a link between business and IT strategy, they would have to gain credibility by providing results matching or exceeding the expectations from the stakeholders. The primary concern of a CIO should be to make sure that the organization in which they work notices the benefits they gain with IT investments and what future benefits could be found. This could be done by giving the CIO a more strategic role in the IT organization.

Moreover the strategic alignment between IT and business is becoming more and more important and the need to understand the organization the IT department supports and also the end customer. In order to give IT and the CIO more influence, the organization must prepare by changing the decision structure and investing more on IT solutions. There is no universal way to determine how a CIO should work and how much influence they should have. It is more or less tailored to the organization or evolved through years of usage.

What we have found is that the CIO is the most senior manager in the IT department, meaning that s/he has the most formal powers concerning IT strategy. The research questions we started with are:

- What are the responsibilities and rights of the Chief Information Officer?
- What can a Chief Information Officer contribute for business strategy?
- What is the Chief Information Officers primary function?

- Does the Chief Information Officer have influence outside the traditional IT-questions?

So, to answer these as good as possible we can say that the responsibilities and rights of the CIO differs from case to case, this can be concluded even after interviewing only two CIO's due to the differences in their roles. The responsibilities include responsibilities over the IT strategy and development of the IS systems and IT-related issues in general. We have also found that a CIO that has more formal power also gets to work more with future oriented questions like strategy instead of being concerned about everyday problems. The CIO's most important contribution to business strategy is the influence on how to best use IT when changing the organization or exploring opportunities. With the CIO having a high hierarchal position s/he gets input from the rest of the business and can also give input to these on how to use IT or how to improve operations. The credibility of a CIO (figure 2-3) can be increased and therefore the influence and assets controlled increase. This leads to the CIO having greater influence of the overall business strategy and also that the organization has the potential to gain more advantage of their IT systems. We can also safely say that the role of the CIO is changing from being more of a supportive tool for the business to giving inputs on how to seize opportunities and how IT can be a competitive tool instead of a supporting ditto. The primary function of our CIO's can be both to develop the IT strategy to suit the business strategy and to keep the organizational systems running smoothly.

The influence of the CIO is not obvious and pre-decided but instead controlled by different organizational systems. This enables the CIO to influence his/her own rights and influence by delivering results that matches or even better exceeds the expectations of all stakeholders in the organization.

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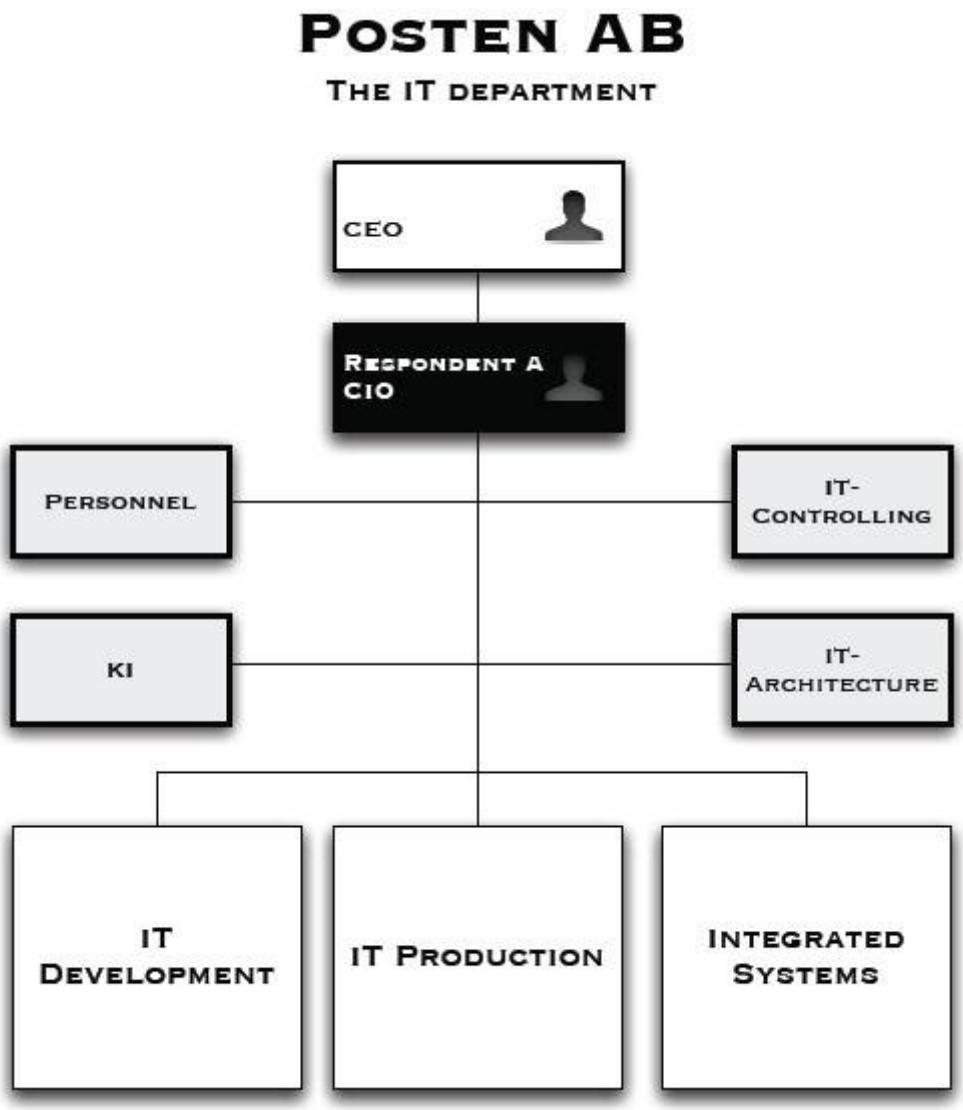
Organization Chart, Posten IT

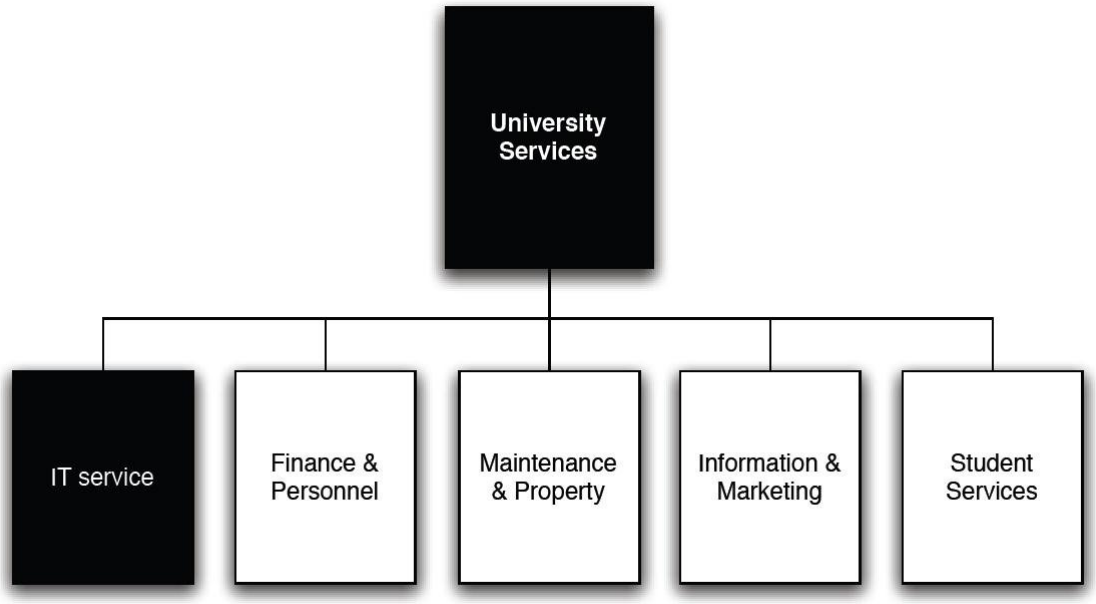


Appendix A - Organization Chart, Posten IT

Group Functions, Posten AB

Appendix B - Group Functions, Posten AB

Organization Chart, University Services



Appendix C, Organization Chart, University Services