Johan Hoek

STEDIN.NET

UNIVERSITEIT TWENTE.

Improving IT sourcing maturity from a roles perspective

Improving IT sourcing maturity from a roles perspective

Business Information Technology master thesis

Enschede, May 31st 2011

Author
Johan Hoek
j.hoek@student.utwente.nl

Graduation Committee

Pascal van Eck	Universiteit Twente
Hilda Folkerts	Universiteit Twente
Peter Hermans	Stedin

Management Summary

In the past decades, information technology (IT) sourcing has become very popular in organizations; over 80% of organizations apply it in some way (McIvor, 2008). Sourcing, the acquiring of services from a third party, can provide great cost reductions, higher efficiency, innovation and more focus on core competencies, but its great downside is its high failure rate; over 70% of projects fail to achieve intended results (Handley & Benton Jr, 2009).

The IT department of Stedin, a Dutch grid operator for electricity and gas, set the goal to become more active in sourcing IT, but is unsure how to approach it. Moreover, becoming a sourcing organization is an important aspect of Stedin's vision and industry developments; current projects require more sourcing activities from Stedin. For example, office automation contracts are managed by an IT Shared Service Center (SSC) that is part of the same holding as Stedin. It is expected to be unbundled in the coming years, meaning that Stedin will take over part of its sourcing responsibilities. Through a set of interviews it appeared that the IT department, Information & Data Services (IDS), is still very young and developing and that *IDS has insufficient structure for mature IT sourcing.* It is the goal of this thesis to provide just that.

A prerequisite for achieving this goal is to implement success factors, or sourcing capabilities. Literature has extensively studied IT sourcing success factors, resulting in several hundred empirical papers on the subject (Lacity, Khan, Yan, & Willcocks, 2010). In this thesis these success factors are compared to the carefully selected scientific e-Sourcing Capability Model (e-SCM), developed by Carnegie Mellon University (Carnegie Mellon, 2011).

Using theoretical and context-related criteria and an exploratory case study, a scope was applied to the e-SCM. Three of the model's seventeen capabilities were selected for further analysis in IDS: Governance Management, Relationship Management and Sourced Services Management.

Then, using RACI (a method for allocating responsibilities), two gap analyses were performed: 1) between current IDS and ideal IDS and 2) between IDS and the Shared Service Center. This provided insights that will help IDS to become more structured in IT sourcing; it will reduce the risk of failing sourcing projects and will increase potential benefits. Based on the first analysis, a feasible advice was formulated for IDS, consisting of the following steps:

1. Implement a sourcing process manager. He/she should set up, manage and revise all sourcing processes (e.g. relationship management and contract management). Competency profiles have been provided separate from this thesis to support employee selection.

2. Define the sourcing governance. It should be based on IDS' sourcing strategy that is being formulated. Close involvement of the sourcing process manager is advised, because he/she has to define processes based on the governance.

3. (Re)define responsibilities for sourcing processes. Special attention should be given to contract, service and account managers; their exact responsibilities are unclear.

4. Implement and review the processes and responsibilities. Reviews can lead to three outcomes:

    a. Implementation was successful, continue improving sourcing structure
    b. Processes were incorrect or unworkable and should be revised
    c. Responsibilities were incorrect or unworkable and should be revised

An important prerequisite for these changes to succeed is that they are executed and supported by the right employees with the right competencies (Pundziene, Alonderiene, & Buoziute, 2007). Therefore, competency profiles have been set up based on these roles, activities and responsibilities. The profiles fit the format of Stedin's human resource department and can directly be used for employee assessments.

The second comparison, between the SSC and IDS, resulted in additional insights for the unbundling. The following suggestions are made based on these insights:

- The SSC has more alignment between sourcing and architecture. Setting up close cooperation between IDS' and the SSC's architects will reduce required effort and will smoothen the SSC unbundling.

- Contract, service and account manager roles differ between IDS and the SSC. Only if IDS moves to its ideal situation, they can be integrated directly because responsibilities and activities are then defined.

- The SSC performs formalized stakeholder feedback surveys, which IDS does not. Before the unbundling it will benefit IDS to learn from these activities and set up additional stakeholder feedback surveys as well.

- Finally, both organizations source almost completely ad hoc. Integrating two ad hoc working organizations is a huge challenge, because there are no defined processes that can be compared. Because of the unbundling, the SSC is not likely to invest in documenting and optimizing processes and IDS is therefore advised to do this. If one of two organizations is structured, merging them will already be less difficult.

No further suggestions on the unbundling are defined because many details on the unbundling are uncertain (the unbundling is currently put 'on hold').

The advice and suggestions will support IDS in developing towards a structured, more successful and mature IT sourcing organization, which is crucial for future developments in the industry and within Stedin. Too many activities are performed ad hoc and all employees have expressed their desire for more structure and agreement. Parts of the advice have already been included in development plans of IDS departments and supplier management improvement.

Preface

It has nearly been a year since the first contacts with Stedin were made for this graduation project. Via a close connection at Eneco the first meetings were planned to discuss the possibilities. To my surprise I directly received enthusiastic replies from the head architect, an IT director and the general CIO. After these meetings the choice was made to analyze IT sourcing opportunities at Stedin.

One of my friends stated that IT sourcing is nothing more than managing service level agreements. I found this remarkable and was interested in finding out the truth in practice. Now, after four months of reading, writing, talking and rewriting, the project is completed and this thesis is handed over to Stedin. It will show that the truth lies far from my friend's statement and that *good* sourcing is maybe one of the greatest challenges for organizations today.

This project provided me with great insights in the practice of every day work and reconfirmed that theoretical models often lay far from the real world. I hope this thesis and all other deliverables will help Stedin to move from a young and developing organization towards a more mature and structured one.

This project could never have been a success without the cooperation and support of everyone involved. As a first I thank Ronald Hoek and original supervisor Frank Stollman, for arranging this opportunity and setting up this research. Second, I thank my second Stedin supervisor Peter Hermans and the university supervisors, Pascal van Eck and Hilda Folkerts, for their guidance and critical remarks and questions. Finally, I thank all the Stedin and Eneco employees that helped me to gather information and data.

As a final note, I was pleasantly surprised by the open and informal culture within Stedin. I am therefore happy to note that I will start my career at Stedin and I hope to see the fruits of this research in the coming years.

I hope you will enjoy reading this thesis.

Best regards,

Johan Hoek

Table of Contents

List of Figures

List of Tables

List of Abbreviations

Agr	Sourcing Agreements
App	Sourcing Approach
CEO	Corporate Executive Officer
CIO	Chief Information Officer
CMMI-Acq	Capability Maturity Model Integration for Acquisitions
Cmp	Sourcing Completion
COBIT	Control Objectives for Information and related Technology
e-SCM	e-Sourcing Capability Model
EIS	Eneco Information Services
FTE	Full-Time Equivalent
Gov	Governance Management
IDS	Information & Data Services
IM	Information Manager
IOM2	Innovation within an Outsourcing relationship Maturity Model
IS	Information Systems
IT	Information Technology
Knw	Knowledge Management
Mgt	Sourced Services Management
MVS	Marketing Sales System (Marketing Verkoop Systeem in Dutch)
Ocm	Organizational Change Management
OLA	Operational Level Agreement
Opa	Sourcing Opportunity Analysis
P3	Plateau 3
P2	Plateau 2
Pln	Sourcing Planning
Ppl	People Management
RACI	Responsible, Accountable, Consulted, Informed
Rel	Relationship Management
RFP	Request For Proposal
SCM	Sourcing Capability Model
SLA	Service Level Agreement
Spe	Service Provider Evaluation
SSC	Shared Service Center
Str	Sourcing Strategy Management
Tch	Technology Management
Tfr	Service Transfer
Thr	Threat Management
TL	Team Leader
Val	Value Management
WoS	Web of Science

1 Introduction

This Chapter provides an introduction to the context of this master's thesis and its setup. First, a general introduction to IT sourcing is provided. Second, the organizational context for this study is explained and third, the problem statement is given. The Chapter concludes with the structure of the thesis.

1.1 IT sourcing

Information Technology (IT) is an important prerequisite for organizations to do their jobs. Systems must be up and running and should quickly respond to the user's needs. To make sure that these systems keep running, there must be personnel to ensure this and to respond when problems occur. This requires skilled personnel and costs a lot of money. This money however, may better be invested in improving the core business process; the company's reason for existence.

One solution for this problem is to source IT related activities to the market. This allows organizations to focus on improving its own core business; it might even save money in the end. In practice this has proven to be quite challenging. Studies prove that over seventy percent of outsourcing projects have not achieved its intended results for a multitude of reasons (Handley & Benton Jr, 2009; Zineldin & Bredenlöw, 2003).

One example of these challenges is the relationship with the sourcing partner. In the past, relations were cost-oriented and service agreements provided the boundaries of the provided service. In the last decade, a shift has started towards more long-term partnerships with less partners and trust has become an important success factor (Casale, 2007). In literature this is termed 'the move to the middle (Clemons, Reddi, & Row, 1993).

Because of these challenges, it has been a prevalent subject in information systems literature. In this thesis, IT sourcing is studied at Stedin. The next Section describes Stedin and the context in which this study takes place.

1.2 Stedin

Stedin is the grid operator for electricity and gas in the most populated region in the Netherlands; the Randstad. Their service area covers three of the four largest cities in the Netherlands: Rotterdam, Utrecht and Den Haag. In 2009, Stedin controlled over 1.8 million gas connections and over 1.9 million electricity connections. Stedin's mission is to 'safely and continuously transport energy via its grid to millions of customers, now and in the future'. Stedin's strategy is to realize its goals by improving its expertise, working together and continuously improving performance.

One of the aspects of Stedin's vision is to source those activities that can best be performed by the market. Although this has a wider approach than IT sourcing, it shows Stedin's interest for sourcing.

Originally, operations were handled by regional public organizations. Some of these organizations in the Randstad merged in 1995 into one organization, Eneco, which was privatized in 2000. It performed grid operations (called Eneco Netbeheer), acted as a customer supplier and as a contractor. Eneco was no longer a government organization, but was still subject to many regulations. This can best be understood in terms of 'nothing is allowed, except…'.

In 2008, Eneco Netbeheer was renamed Stedin and in January 2011, Stedin was separated from Eneco and it became independent. The only relation it now has to Eneco is that they are both part of Eneco Holding. The holding consists of three core companies, Eneco, Stedin and Joulz (the contractor). Currently, Stedin is unbundling from Eneco, resulting in many changes. Stedin currently has around 1200 full-time equivalents (FTE).

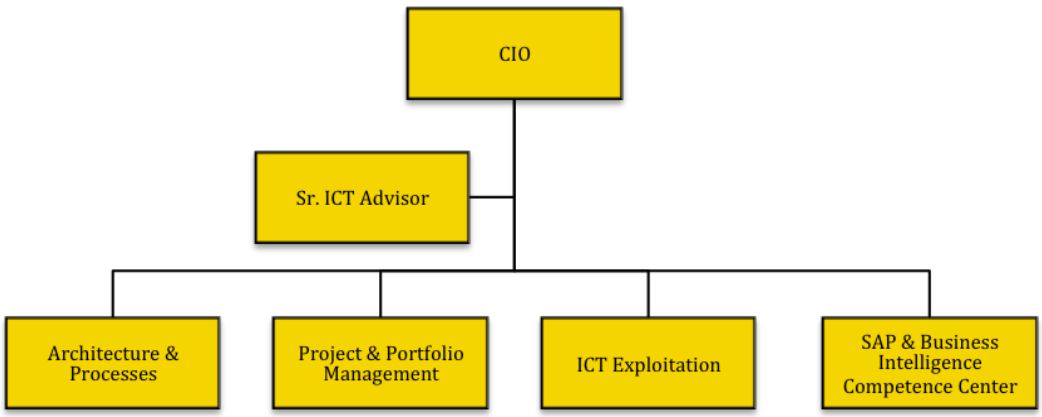
1.3 IDS

For Stedin's IT department, IDS, the unbundling has a large impact. Before 2008, the IT landscape of Eneco was divided over several IT divisions with their own responsibilities. In 2008, a general IT department was set up for Eneco called Eneco Information Services (EIS). Stedin had its own small information management department of around five FTE.

May 2010, EIS was divided over the three core companies. For those activities that were still shared, an IT Shared Service Center (SSC) remained in place (e.g. for office automation). In the past three years, more responsibilities were divided over the core companies and it is likely that in the near future the SSC will be totally unbundled and no longer exists. Figure 1 below shows the organizational chart of IDS with four main departments. It exists of around 150 FTE.

Because IDS is still a young organization, the vision, mission and strategy are not yet clearly defined. The department is currently setting up development plans and is formulating a strategy for the coming years. IDS' current goal is to provide 'hassle-free computing' to its customer, the Stedin business.

Figure 1 Organizational chart of IDS



1.3.1 IT sourcing in IDS

IT sourcing receives increasing attention in IDS and is mainly managed within ICT Exploitation (see Figure 1). It has one staff employee, the contract manager. He is responsible for the legal side of contracts and makes sure that they are correctly set up. Besides this, there are three sub-departments. These are Design, Build & Test; Operational Management and Service Management.

The first two are less related to sourcing and mainly focuses on system adjustments or improvements. Service Management operates on a higher level and manages service level agreements (SLAs), both with the internal client of IDS and with the external supplier of IDS. It also includes the Service Desk for Stedin employees and several IT process managers.

IDS manages over 200 contracts with 26 suppliers, ranging from straightforward software licenses to large system development and maintenance. Sourcing is not new to IDS, although most contracts are taken over from former EIS and the SSC. Experience with setting up IT sourcing projects is therefore limited within IDS. Following, the SSC, its unbundling and the main problem statement are discussed.

1.3.2 SSC

After the separation of EIS some IT activities remained centralized in the Eneco Holding. Due to time pressure these activities were not yet separated, which led to the creation of the SSC. It exists for a year at the writing of this thesis and has a total of 98 FTE.

The mission of the SSC is to 'unburden Eneco ICT, Stedin IDS and Joulz IB by providing standard ICT-services and products against an agreed and at least market conform cost-to-serve by using synergy advantages'. Its vision is to 'develop a vision for the future for the standard ICT-services and products and, where possible, to unbundle activities towards Eneco ICT, Stedin IDS and Joulz IB'.

The SSC's main activities are:

1. Operational execution and management of basic infrastructure, office automation and telephony;
2. Where needed the operational execution and management of supporting or shared applications;
3. Contract management, infrastructure project management, architecture and service & process management for 1 and 2.

One of the most important and largest contracts that the SSC manages is the Capgemini contract. It covers office automation, housing & hosting, remote network access and technical application management for some applications.

The main contact and customer for the SSC is the IT department of the three companies (for Stedin, this is IDS). The SSC is minimally involved with the Stedin business.

1.3.3 The Unbundling

The SSC was intended to be unbundled in time and should not be permanent. It was planned to unbundle entirely per January 2012 and the intention was to completely eliminate the SSC so that the three organizations are completely independent of the others. This has several complications. For example, employees have to be divided over the organizations and contracts have to be split up. This is not only a legal, but also an organizational challenge because activities and responsibilities have to be reconsidered and matched with the Stedin environment.

During this research it was decided to put the unbundling 'on hold' and it is unsure whether it will take place. It might be done per January 2012 (the original plan), it might be forwarded one or more years, or it might be completely cancelled. However, because the SSC is also active in sourcing it will prove an interesting case and is therefore included in this thesis. The analysis will also prove valuable should the unbundling continue.

1.4 Problem statement

The initial reason for starting this study was to analyze how sourcing decisions should be made in IDS. The main reason for this question was insufficient structure in the decision-making and knowledge on decision aspects. It was often unclear what 'script' should be followed and what questions should be asked.

Although an interesting problem, it required further analysis. In order to analyze the core problem, interviews (both formal and informal) were held with people in IDS. The formal interviews were semi-structured (Baarda, Goede, & Meer-Middelburg, 1996) and their main goal was to analyze the employee's opinion on and experience with sourcing in general and within IDS. It became clear that the initial question was more of a symptom than an actual problem, because several more of such problems were found. A few examples:

First, besides a common decision-making model, there was no general IT sourcing strategy or governance. Sourcing decisions were made situational and not by following a predefined set of guidelines and goals. Several months before the start of this project the Kirkman company was asked to set up this sourcing strategy, but it was still not completed. At the completion point of this research, still no final strategy has been formulated.

Second, service level managers and contract managers use no predefined structures and base their decisions on intuition, experience and teaming with each other. Due to their experience and good relationship this has not yet been a problem, but it will be when sourcing becomes more important. This situation is not new to them, and one of the service managers is searching for ways to improve and structure supplier management.

One striking example of this situation is the following. In conversation with both a service level manager and the contract manager the question was raised when a system change would result in an official project or in a simple system adjustment. Initially, this choice had a financial basis; everything above 50k was made into a project. However, when it concerned a specific system, a small adjustment would also result in a project due to the system's critical nature. The

final decision was made on 'fingerspitzengefühl' and their teaming; there was no way to structure it.

Third, in conversation with management, concerns were expressed for service provider management, especially for the unbundling of the SSC. There already were tensions in service provider relationships and it was unclear how they should be solved. A plan needed to be formulated, but it is unclear how and what aspects needed consideration.

Overall, there is one common problem stressed by IDS employees: there is insufficient structure and agreement on what to source and how to source. The main cause for this situation is that IDS is relatively young and developing. It needs more structure to grow towards a mature and efficient IT department. Concluding, the following main problem statement for this research was defined:

IDS Stedin is insufficiently structured for mature IT sourcing.

In this thesis, an advice is formulated on how to solve this problem using tested and proven theoretical models.

1.5 Relevance for the future

The problem statement is important to solve for the future, because IDS desires to become more active in sourcing. In the coming years some important changes will occur in the electricity and gas industry and within Stedin. Some examples are smart meters, centralized connection registers and large system implementations. In order to be ready for these changes it is crucial for IDS to move towards more mature IT sourcing.

As stated earlier, IDS is setting up development plans and roadmaps. A technical goal architecture is defined for 2020 but there is no plan yet for the way towards it. These plans will be completed somewhere in 2011.

In the coming 3-5 years a large system implementation will be performed, a typical sourcing program[1]. This program, Plateau 3 (P3), will be discussed in more detail later in this thesis. P3 requires IDS to think about their supplier management and how the program will be made a success. History has proven that purely setting up a contract has not been a guarantee for success.

A good example of this is the development of an IT system by a Finnish company for Stedin. Agreements were in place, but the differences in culture and insufficient relationship management made it a difficult project. An IDS employee flew to Finland every few weeks to physically check on the progress and the Finnish did not deliver reports in the way IDS desired them. Although much has been learned, this was one of the few larger sourcing projects that IDS performed and it shows the relevance of the main problem statement for the future.

[1] A program can be seen as a very large project and consists of multiple projects.

Concluding, the problem statement in the previous Section should be reduced or resolved within two years if IDS wants to have a structured and mature base for sourcing in the future.

1.6 Thesis structure

The main setup and structure of this thesis is provided in Figure 2, showing eight chapters. This Chapter contained the introduction and is followed by Chapter two, describing the research questions and methodology to answer them. Then, Chapter three discusses the theoretical background of the most relevant topics. Chapter four and five explain the theoretical model selection and the scope of the model that was used. Chapter six then discusses the current and ideal situation, followed by its conclusions in Chapter seven. A final advice is formulated on how to resolve the main problem statement in Chapter eight and a discussion of this thesis is provided in Chapter nine.

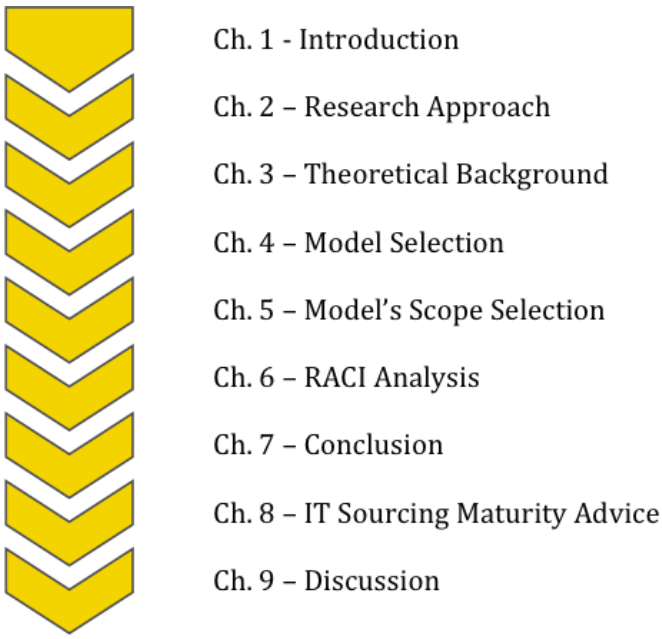


Figure 2 Thesis Structure

A more detailed description and theoretical support of the thesis' structure is provided in the next Chapter.

2 Research Approach

This Chapter describes the research approach. First, the structure is further explained. Second, the research questions are described based on the problem statement and third, the used research methods are explained.

2.1 The Checkland Methodology

There are multiple methodologies for performing and structuring research. For this thesis the Checkland methodology for action research was selected (Wilson, 1984), which prescribes seven research stages. Each step is illustrated below.

1. The problem situation: unstructured
2. The problem situation: expressed
3. Root definitions of relevant systems
4. Conceptual models
5. Comparison of 4 with 2
6. Definition of feasible desirable changes
7. Action to solve the problem or improve the situation

Stage 1 has already been described in the previous Chapter, resulting in the main problem statement. In Stage 2 the problem is further structured and in Stage 3 the most beneficial improvement area is selected. In Stage 4 a model is selected for the desired and future situation, which is then compared to the current situation in Stage 5. Then, realistic and feasible changes for the current situation are selected in Stage 6 and implemented in Stage 7.

In this research only stage 1 through 6 are executed; for stage 7 an advice will be formulated. In the next Section the stages and problem statement are translated to research questions.

2.2 Research Questions

In the previous Chapter, the main problem statement was found: *IDS Stedin is insufficiently structured for mature IT sourcing.* The main research question that follows from this problem is:

What changes in structure are necessary for IDS Stedin to become more mature in IT sourcing?

A higher maturity was already argued to be important when more sourcing activities are deployed; it will improve the chances of success. The statement and main question however raise some new questions, which need to be answered. The Checkland methodology is used to structure these in a logical order.

Q1. How can organizations improve IT sourcing maturity?
   a. How is IT sourcing maturity improved according to literature?
   b. What models exist for improving IT sourcing maturity?

Q2. What theoretical model is suitable for IDS?
   a. What theoretical criteria exist for the selection?
   b. What practical criteria exist for the selection?
   c. What scope of the model is most useful?

Q3. What changes are required to resolve the differences (Delta)?
   a. What approach should be used for measuring IST and SOLL?
   b. What is the current situation at IDS (IST)?
   c. What is the ideal situation at IDS (SOLL)?
   d. What are the differences between IST and SOLL?
Q4. How does the unbundling of the SSC impact IDS?
   a. What is the IST at the SSC?
   b. What differences exist between the SSC and IDS?

Visually these questions follow the model depicted in Figure 3. Based on the literature analysis (Q1), a theoretical model is selected (Q2). Then, the IST, SOLL and their differences are defined and analyzed (Q3). Finally, the model is applied at the SSC (Q4), providing useful insights for the unbundling of the SSC in the future. The general research question will be answered in a final advice on the delta and the SSC. Table 1 below shows which Chapter handles which question and which stage of the Checkland methodology it covers. A summarized answer of each question is provided in the conclusion, in Chapter 7.

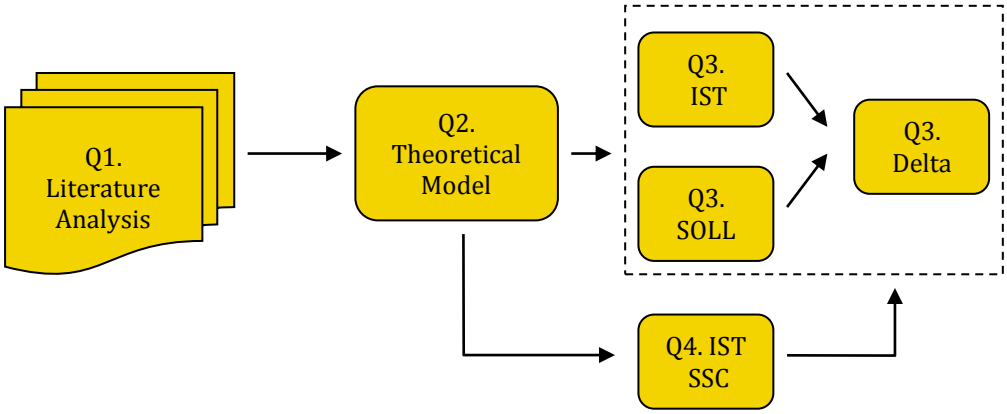


Figure 3 Research Steps

Table 1 Index of research questions per chapter and Checkland stage

Research Question	Chapter	Stage
Q1. How can organizations improve IT sourcing maturity?	3.2 – 3.4	3
a. How is IT sourcing maturity improved according to literature?	3.2 – 3.4	3
b. What models exist for improving IT sourcing maturity?	3.3	3
Q2. What theoretical model is suitable for IDS?	4.2	3
a. What theoretical criteria exist for the selection?	4.1	3
b. What practical criteria exist for the selection?	4.1	3
c. What scope of the model is most useful?	5	3
Q3. What changes are required to improve IT sourcing maturity (Delta)?	8.1	6
a. What approach should be used for measuring IST and SOLL?	6.1	3
b. What is the current situation at IDS (IST)?	App. G	2
c. What is the ideal situation at IDS (SOLL)?	App. H	4
d. What are the differences between IST and SOLL?	6.2	5
Q4. How does the unbundling of the SSC impact IDS?	8.2	6
a. What is the IST at the SSC?	App. I	2
b. What differences exist between the SSC and IDS	6.3	5

2.3 Research Methods

The Checkland methodology assisted in structuring the research questions, but not for the answering them. Each question requires a different technique for answering and for that, the Design Science Methodology Research Cycle (Wieringa, 2009) is used. The cycle (see Figure 4) is part of a larger engineering cycle and although the latter is not suitable here, its research cycle proved useful for answering research questions. For each research question, this cycle was passed through to find the most suitable research approach. The selected approaches per question are described below.

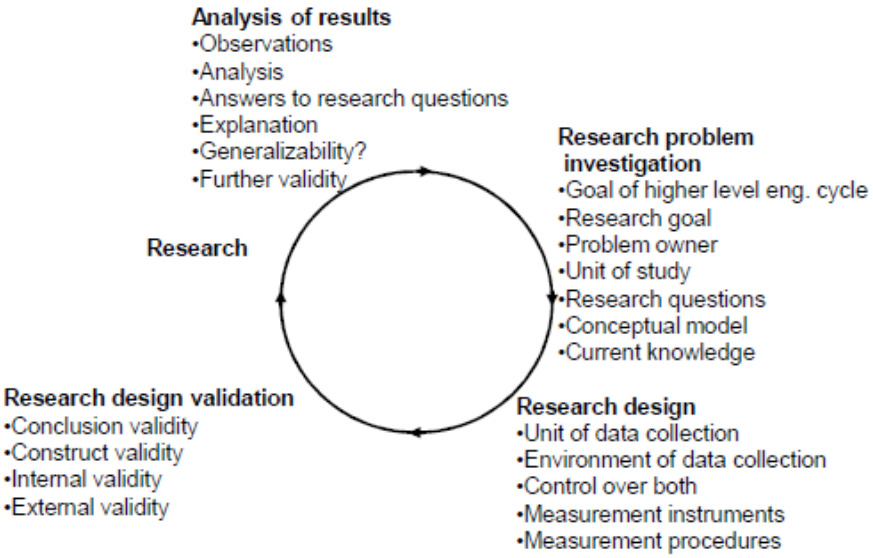


Figure 4 DSM Research Cycle

2.3.1 Literature analysis

Q1 is answered through a literature analysis. Using the Web of Science and Scopus literature search engines, most important journals were studied (Schwartz & Russo, 2004). In addition, Google Scholar was used for complementary literature. The latter proved especially useful for finding references through back-tracing. The literature analysis has two goals. First, gathering general knowledge on improving IT sourcing maturity (Q1a). Second, finding and selecting potential models for this research (Q1b).

Models are selected when they fulfilled three criteria: 1) it is considered a model or framework, 2) it provides practical advice on how to implement it and 3) it covers at least five focus areas. The latter was added because sourcing literature provides many studies on two or three focus areas, which provide little practical value in this context.

In addition to the literature analysis, sourcing experts and Internet search engines (e.g. Google) were consulted, resulting in several other models.

2.3.2 Multi criteria analysis

The goal of Q2 is to select the theoretical model to be used in the research using a multi-criteria analysis. Criteria are either theoretical or practical (Q2a/Q2b). Theoretical criteria compare the details of the models themselves; practical criteria are derived both from internal documents and semi-structured

interviews. These interviews were held with department heads and the main goal was to analyze what focus areas were deemed important and needed attention. Next, the models were compared. Each model is scored for each criterion on a relative scale, resulting in the most suitable model.

2.3.3 Scope determination

Often, maturity oriented models provide big challenges for organizations. For this reason a scope has to be applied, answering Q2c, which is done in two steps. First, a theoretical analysis is performed to find which part of the model has proven most relevant in literature. Second, a limited exploratory case study (Yin, 2003) is performed to determine the final, most practically relevant scope.

For this case study, the Plateau 3 program is selected. Plateau 3 (P3) started recently and its goal is to step out of a large marketing sales system that is used by the entire Eneco Holding. Stedin wants to develop its own system and wants to be independent. Because it is a large sourcing program it provides a good case to analyze which focus areas already receive attention within IDS. Moreover, findings prove useful for improving its approach.

2.3.4 RACI analysis

Q3 and Q4 are answered using RACI. RACI is a commonly accepted method that helps to assign responsibilities to roles in the organization and stands for:

1. Responsible: responsible for execution of the task
2. Accountable: end result responsibility
3. Consulted: has specific expertise in an area and must be consulted for advice
4. Informed: needs to know the outcomes of an activity, either for his own work or for subsequent activities

Its original source is unclear in literature and it is mostly used as common knowledge. For another application of RACI, see the COBIT framework (IT Governance Institute, 2007).

A RACI horizontally shows activities and vertically the different roles that are present in an organization. Activities will be based on the theoretical model; roles are based on current IDS and literature.

In total three RACIs are developed. First, the IST for IDS (Q3b) provides the current situation and shows which role is currently responsible for which activity. For the IST, only A and R roles will be collected, because C and I roles are often not formalized. The same will be done for the IST of the SSC (Q4a). The SOLL RACI (Q3c) concerns an ideal and future situation, and therefore C and I roles are included.

The RACIs are developed using structured interviews. For the IST RACI of *IDS*, an empty RACI is provided to the interviewee. Then, in one session, the entire RACI is filled in. The interviewee is only requested to identify responsibilities in his work or that of his direct colleagues. Afterwards, a consolidated RACI is formed by combining the results of the interviews.

The *SOLL* RACI is developed incrementally. A first SOLL will be set up based on the activities and role definitions. Then, each department head is interviewed to

discuss his/her opinion on the RACI. The RACI is then adjusted with the comments and the next department head is interviewed. In total five department heads and the CIO will be interviewed.

The approach for the *SSC* IST RACI is discussed in Sub-Section 2.3.6. Q3d is answered by comparing the IDS IST and SOLL with each other, to find differences in current and ideal functions, activities and responsibilities. Q4b is answered by comparing the SSC IST with the IDS IST and SOLL.

2.3.5 Competency profile development

The SOLL RACI will provide clearly defined roles and responsibilities. It is crucial for their implementation that the most suitable employees fulfill them (Pundziene, et al., 2007). In order to analyze whether an employee is suitable, competency profiles are required. Stedin uses the HFM Talent Index approach (HFMtalentindex, 2011) that provides a set of personnel competencies, profile templates and assessment tools. The exact approach is explained in the corresponding Chapter.

2.3.6 Case study at the SSC

Due to the likely unbundling of the SSC, more activities and responsibilities will be transferred to IDS. A case study is performed at the SSC to define their IST RACI using structured interviews with three SSC employees. In the interviews, all activities and roles will be discussed and the resulting RACI is then compared to the IDS IST to answer the final question, Q4.

2.4 Deliverables

In this research several deliverables are provided to Stedin, besides this thesis. First, a theoretical model is selected that helps IDS to move towards more mature IT sourcing.

Second, the exploratory case study results in an overview of which activities are already performed in line with the model, and which need more attention.

Third, the three RACIs are provided that IDS can use to delegate responsibilities to the right functions. Included is a set of competency profiles that describe required competencies, knowledge and experience as well as a description of tasks and results. These profiles can directly be converted to personnel assessments and provide a quick start-up for analyzing which employee is most suited for which function.

Finally, the thesis provides a useful and repeatable approach for improving IT sourcing maturity, as well as a tailored advice for IDS on how to take the first steps.

3 Theoretical Background

This Chapter provides the theoretical background for this research. It starts by explaining some key aspects of the sourcing history, followed by an explanation of the term 'sourcing capability', which is central in this research. Next, the results of the literature analysis are explained and finally, the background of roles and competencies is explained. Roles are crucial for a good RACI; competencies play an important part in implementing these roles in an organization.

3.1 Sourcing History

These days, sourcing IT is very popular and most organizations (over eighty percent) use it (McIvor, 2008). For example, using servers for web hosting that are located somewhere in the world or hiring someone to develop software code is sourcing. There are many forms of sourcing and sourcing IT is only one of the options. Hiring other organizations to build mechanical systems is sourcing and paying an external accountant for bookkeeping is sourcing. These examples indicate that sourcing has been done for a long time in a wide range and even IT sourcing goes back several decades. It also indicates the importance of a good sourcing definition. The history of IT sourcing in general is discussed in this Section; the used definition for this research is provided in the following Section.

3.1.1 First developments

One of the first outsourcing cases mentioned in literature is the company Electronic Data Systems which outsourced its data processing function in 1963 (Dibbern, Goles, Hirschheim, & Jayatilaka, 2004). Only after the Kodak company started outsourcing the same activity in 1989, information systems outsourcing became popular (Dibbern, et al., 2004; Ketler & Walstrom, 1993). This set the pace for information systems outsourcing research, focusing on different topics such as the degree of outsourcing and outsourcing success (Niessink, Clerc, Tijdink, & Vliet, 2005).

In the years afterwards, increasing research has been done to measure sourcing success in general and the factors that influence the sourcing decision. Many sourcing projects do not achieve their intended goal and empirical research has tried to analyze the causes. A recent study found over 160 empirical IT sourcing articles with 741 different influential factors (Lacity, et al., 2010). There are even more studies that did not use an empirical approach (Alsudairi & Dwivedi, 2010). It is safe to state that there is a considerable amount of IT sourcing literature.

3.1.2 A need for capabilities

One of the developing trends is the search for and development of sourcing capabilities to become more mature in sourcing and by doing so, reducing the chance of failure. A popular example in literature is the Nine Core IS Capabilities theory (Feeny & Willcocks, 1998). It consists of nine capabilities that an organization should keep in-house at all time; a basis for good sourcing. Figure 5 below shows these capabilities in their model, divided over three challenge areas. Lacity et al. found 21 different capabilities in their survey, going beyond the nine defined by Feeny and Willcocks.

One of the capabilities below is Relationship Building. The authors describe it as "getting the business constructively engaged in IS/IT issues" (Feeny & Willcocks, 1998). Although this stresses the relationship between business and IT, the same goes for organizations and their service providers. In the more early years of IT sourcing, the main goal was cost reduction and efficiency and providers were managed purely on service level agreements. One of the developments of the past years is the move towards more relation- and partnership, sometimes called 'outsourcing 2.0' (Casale, 2007).

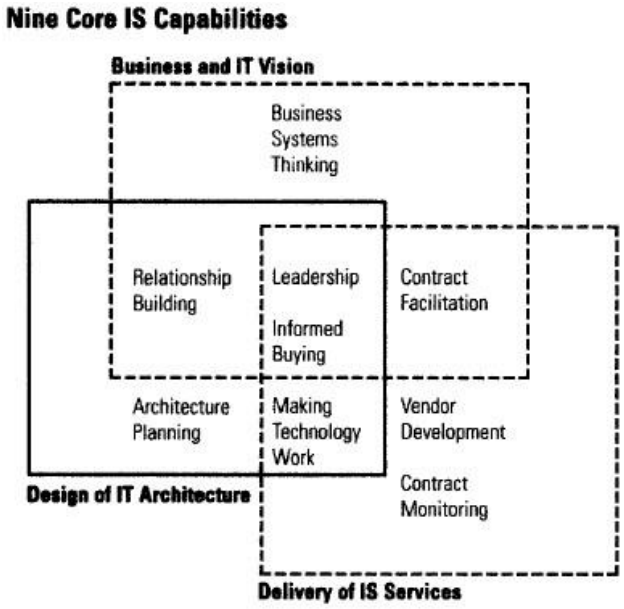


Figure 5 Nine Core IS Capabilities

The use and development of capabilities is not only known in sourcing. They are also included in e.g. IT maturity models, such as the CMMI (Carnegie Mellon, 2010). In this thesis the identification and development of necessary sourcing capabilities is discussed, but first a definition is required to stress its exact meaning. This is discussed in the next Section.

3.2 Sourcing Capabilities

Capabilities can be combined in so-called capability models (Baarda, Goede, & Teunissen, 1995). They provide an indication of how well an organization performs these capabilities and what could be improved. A crucial first question is then to define what a sourcing capability exactly is. This is answered in this Section, followed by an explanation of the relevance of sourcing capabilities.

3.2.1 Definition

A capability according to the Princeton dictionary is "*the quality of being capable*". *Capable* is defined as "*having the requisite qualities for*" and "*have the skills and qualifications to do things well*" (Princeton, 2011).

The next, more difficult definition concerns sourcing. It knows many variants and definitions, and its full meaning is best described by explaining all its characteristics, or dimensions (Hoek, 2011; Linden, 2010). It stretches too far to fully discuss his analysis but Linden found eleven characteristics that describe

sourcing: type, duration, strategy, complexity, history, reason, location, impact, relationship, essence and phase. Each characteristic may be seen as a separate dimension of sourcing (Hoek, 2011), making both the decision for sourcing, and performing it, a complex task with many variables.

Sourcing definitions are derived in many studies, e.g. (Chaudhury, Nam, & Rao, 1995; Cheon, Grover, & Teng, 1995; L. P. Willcocks & Kern, 1998). Dibbern has provided an overview of these definitions in 2004 and also found definitions for multiple types of sourcing (Dibbern, et al., 2004). In a later study over fifty different sourcing types were identified in literature (Hoek, 2011). Some examples are general outsourcing, selective sourcing, value-added outsourcing (Millar, 1994) and total outsourcing (Lacity & Hirschheim, 1995).

The general sourcing definition used here is based on these studies and is specified for IS/IT: *Sourcing is acquiring partial or complete IS/IT services from one or more external service providers in order to achieve some organizational goal.* Note that sourcing is a broader term than outsourcing, which occurs when IS/IT activities are *turned over* to another organization. To be consistent, in the remainder of this thesis, only the term sourcing is used unless explicitly required otherwise.

Combining both definitions results in the definition for sourcing capabilities:

Skills and qualifications in acquiring partial or complete IS/IT services from one or more external service providers in order to achieve some organizational goal

3.2.2 Relevance

The following Chapters' goal is to find an appropriate model for measuring and developing sourcing capabilities, but what is the actual use and relevance of these capabilities? The vast amount of sourcing studies provide a considerable base of knowledge (Lacity, et al., 2010). An important and often mentioned motivation for these studies is the high amount (two-thirds) of failing sourcing projects; deadlines and expectations are not achieved, or projects are cancelled (Beulen & Tiwari, 2010; Shahzada, 2010). Most studies found by Lacity et al. studied the use of capabilities to solve this problem. It is therefore considered a relevant direction to take for this research.

The next Section discusses sourcing capability models (SCMs). These are models that combine sourcing capabilities for improvement of sourcing maturity.

3.3 Sourcing Capability Models

A model in science is generally considered an abstract representation of reality (Princeton, 2011). This Section explains the search for a model containing sourcing capabilities. The scientific and non-scientific literature search is explained, followed by a concise explanation of each model.

3.3.1 Literature Search

For the literature search, three search engines were used; Web of Science (WoS), covering at least 21 of the top 25 IS journals (Schwartz & Russo, 2004), Scopus and Google Scholar. The first two were the main search engines; Scholar was

used for literature that was not available or readable via Scopus or WoS. Models were selected when they fulfill the criteria mentioned in Section 2.3.1.

3.3.2 Other Sources

Two non-scientific sources were used: First, the Google search engine was used for non-scientific literature and models. Non-scientific literature was primarily used for gaining more understanding of issues and views in practice. Also, some models referred to in literature are not published in literature, such as COBIT and e-SCM. Second, sourcing experts involved provided useful SCMs as well.

3.3.3 Long list

In total six models were considered relevant for the long list: the e-SCM (Carnegie Mellon, 2011), Nine Core IS Capabilities (Feeny & Willcocks, 1998), COBIT (IT Governance Institute, 2007), IS Business Smarts (Abel, 2005), CMMI-ACQ (CMMI Product Team, 2007) and the IOM2 (Linden, 2010). Each is shortly discussed below to provide some understanding of their contents; the final model will be discussed in-depth in the next Chapter.

e-SCM

The e-Sourcing Capability Model (note: e-SCM refers to this specific model; the abbreviation SCM refers to sourcing capability models in general) was developed by Carnegie Mellon University, in cooperation with individuals from IT organizations such as HP and IBM. The model consists of two parts, one for the sourcing client (used here) and one for the service provider. The e-SCM uses three dimensions: capability areas (17), sourcing life-cycle stages (5) and capability levels (5). In total 95 practices are described, within these dimensions, that can be mastered by the client organization. The model was endorsed recently by the IAOP (ITSqc, 2011), a global standard-setting organization.

Nine Core IS Capabilities

This model was developed by Feeny and Willcocks in the late 90s and describes nine capabilities that an organization should always control internally in order to successfully exploit ICT (see Figure 5). The model was developed after interviewing over fifty high performers in IT and has been cited by many other studies. The authors tested their model in multiple case studies and eight years after its first creation, the model is still considered relevant and correct (L. Willcocks, Feeny, & Olson, 2006; L. P. Willcocks & Feeny, 2006). With respect to sourcing, the authors state that sourcing should be successful when these capabilities are present in the organization.

COBIT

Control Objectives for Information and related Technology (COBIT) provides a set of practices for delivering IT against business requirements. These practices help to make a link to business requirements, organize IT activities into a generally accepted process model, identify major IT resources to be leveraged and define relevant management control objectives. The model was included because it describes best-practices for acquiring products and services from third parties.

IS Business Smarts

Gartner (Abel, 2005) developed this model because over sixty percent of CIOs said their IS organization lacks necessary business smarts. These business smarts are foremost focused on competencies and skills of in-house IS personnel. This approach is not directly related to sourcing but might prove useful because of three reasons: 1) the authors argue that the competences and skills mentioned have an influence on service providers 2) it provides a useful structure for assessing in-house capabilities and 3) it provides a plan for improving business smarts.

CMMI-Acq

The Capability Maturity Model Integration for Acquisitions is one of multiple models developed by Carnegie Mellon helping organizations to mature in specific areas. This model provides tools for becoming more mature in the acquisition of products and services. Comparable to the e-SCM there are five levels of maturity, from *initial* (level 1) to *optimizing* (level 5). In total 22 process areas, or capabilities are identified divided over the categories Acquisition, Support, Project Management and Process Management.

IOM2

The Innovation within an Outsourcing relationship Maturity Model (IOM2) was developed in a master's thesis. It is based on the e-SCM and CMM (Capability Maturity Model) in general. In total IOM2 considers seven capabilities with 22 related practices. Because of the use of e-SCM, IOM2 has overlapping capabilities but most are focused on relationship management and innovation management in sourcing.

3.4 Roles and Competencies

Sourcing literature discusses the need for trust and good relationships with the service provider, but often leaves out required competencies for roles and functions involved. As explained, people's roles and competencies will be explicitly included in this thesis and its theoretical background is discussed in this Section.

People's competencies are a typical human resource concern. They are often used to determine whether a person is suitable for an opening. Using assessments with extensive questionnaires, the recruiter determines a person's competencies (e.g. customer orientation, team player and flexibility). Another situation when competencies prove relevant is during business changes and reorganizations. Employees receive new or other responsibilities and the organization must be sure that the employee is up to the task. For example, a former programmer is placed in a service management position, to manage the external party. The programmer suddenly needs interpersonal competencies instead of mostly technical ones. When he is not able to develop these, the relationship with the service provider and the entire project is at risk.

The Stedin Human Resource department uses the HFM Talent Index (HFMtalentindex, 2011). Although there are more such overviews (e.g. the IS Business Smarts by Gartner), the HFM set is selected in this research because Stedin uses it. This allows for quicker implementation of the competencies.

4 Model Selection

The theoretical background gave an explanation of six sourcing capability models (SCM) that were found in the literature analysis and could prove useful. In this Chapter, criteria are defined and applied to select the most suitable model. Then, the selected model (the e-SCM by Carnegie Mellon) is discussed in detail.

4.1 Selection Criteria

In order to make the final selection, criteria are needed. They were derived 1) through semi-structured interviews where the main focus was on identifying current and desired sourcing capabilities, 2) through the literature search and 3) by analyzing internal IDS documents. The criteria are listed below; an elaboration on their details is provided in Appendix A.

The SCM should:

1. Support Stedin's strategy and roadmap
    a. The SCM should allow for capability development and improvement.
    b. The SCM should support a wide variety of sourcing arrangements.
    c. The SCM should include architecture
    d. The SCM should include innovation in its capabilities.
2. Support current projects
3. Provide in-depth and measurable descriptions
4. Be theoretically relevant
5. Focus on IT sourcing

4.2 Final Model Selection: e-SCM

Testing the models on these criteria resulted in a clear choice for the e-SCM (see Table 2). E-SCM comes out best on all criteria; CMMI-Acq and IOM2 second and third. Because e-SCM scores highest on all criteria, there is no need for applying weights to the criteria.

Compared to CMMI-Acq, the e-SCM is more focused on IT sourcing; CMMI-Acq focuses on the acquisition of products and services in general. Capabilities that are considered most relevant in the literature survey mentioned are not covered by CMMI-Acq (e.g. relationship management, contract negotiation and cultural distance management).

IOM2 is the newest of the three and is developed in a master thesis in 2010 (Linden, 2010). The thesis combined CMM and e-SCM and found a new SCM specified to innovation. Because it is derived from the e-SCM and only uses parts of it, the e-SCM was found more usable. Also, IDS requires capabilities in a much wider area of which innovation is only a part.

Finally, the e-SCM is the most practical model and can be used without too much further research. The high level of abstraction but specific focus on sourcing makes it applicable in any organization.

Table 2 Qualitative multi-criteria assessment of SCMs

	e-SCM	Nine Core IS Capabilities	COBIT	IS Business Smarts	CMMI-Acq	IOM2
Strategy and roadmap support [2]	All	2 and 3	1, 2 and 3	1 and 2	All	1, 2 and 4
Current Projects[3]	Yes	Limited for most projects	Differs per project	Differs per project	Yes	Differs per project
Depth and Measurability[4]	High	Low	High	Medium	High	High
Theoretical Relevance [5]	High	High	Low	Low	Medium	High
Focus on IT sourcing [6]	Yes	Yes	Yes	No	No	Yes

4.3 e-SCM in detail

e-SCM was developed by the Carnegie Mellon University, school of Computer Sciences, in 2006 and has been implemented by many organizations. Accenture has recognized its usefulness both for service providers and clients (Accenture, 2007) and IAOP has endorsed it recently (ITSqc, 2011).

4.3.1 The model

Its visual representation (see Figure 6) is rather complex and needs explanation. The 95 practices are divided over three dimensions (capability area, life-cycle phase and level) and each block is a practice. Seventeen capability areas were included and divided in two groups; ongoing and life-cycle capabilities. Ongoing capabilities should be present in an organization during each step of the sourcing life-cycle. Life-cycle capabilities are only relevant for a phase of a sourcing project. These phases are analysis, initiation, delivery and completion.

There is a relation between these two capability groups; for example, for the contract management capability, value management is relevant. Therefore practices related to these areas share activities. One of the value practices is to *establish and implement procedures to review organizational sourcing performance*, which has close relation to the contract management practice *establish and implement procedures to monitor and verify that service commitments are being met* (Carnegie Mellon, 2011).

[2] Numbers based on four criteria mentioned in Section 4.1
[3] Qualitative interpretation of model's support for different running IT sourcing projects
[4] Interpreted in a scale of low, medium, high
[5] Interpreted in a scale of low, medium, high
[6] Only confirmed if sourcing capabilities are specified to IT sourcing

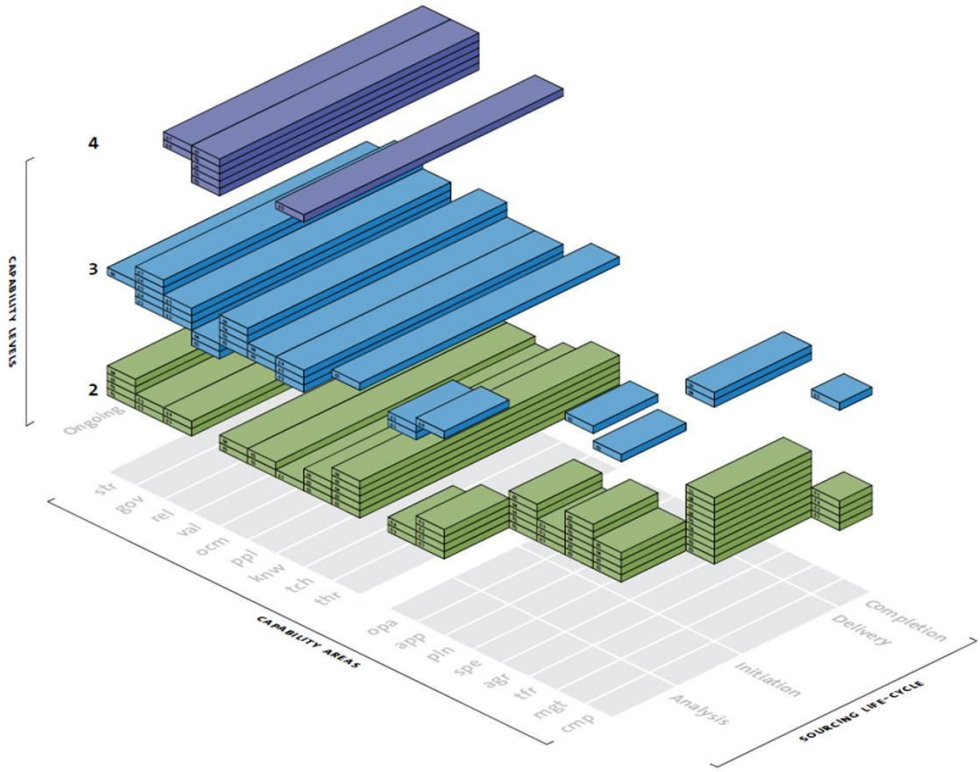


Figure 6 e-SCM

The third dimension concerns the five capability levels. In the Figure above, the grey area on the bottom is level one; there are no practices implemented. Level two, three and four require some additional explanation. Level two practices are implemented in a *single* project, whereas level three practices are implemented in the *entire* organization. Then, level four is aimed at more future and long-term practices, such as innovation and continuous improvement. For example, relationship management at level two means to plan periodic meetings with a supplier to discuss progress. At level three, relationship management means to have a standard 'playbook' for relationships, describing who plans meetings and what to do when relationship are under pressure *in general*. Level five means that all practices have to be implemented successfully in at least two projects.

Each practice consists of major, required, and recommended activities. Major activities consist of the same activities per practice: First, provide support for the practice. Second, document work products and tasks for the practice and third, support the implementation of the practice. Only the second major activity has required and recommended activities. For an understanding of the individual capabilities, each is shortly explained in Appendix B. In the following Chapters, a subset of capabilities is selected for the research. When necessary, more detail is provided on an individual capability or practice in the remainder of this thesis.

4.3.2 Capability and maturity models

There is an important distinction between *capability* models and *maturity* models (Carnegie Mellon, 2011; CMMI Product Team, 2007). Capability models are aimed at making a process more predictable, whereas maturity models are aimed at

improving the process itself. More specific, a high *capability* level means that the process outcomes are predictable even in highly complex situations; a high *maturity* level means a highly optimized and efficient process that may not necessarily be predictable in highly complex situations (Paulk, Weber, Curtis, & Chrissis, 1995). A third option is a combination of which CMMI-Acq is an example. Here, both the predictability of the process as well as the optimization of the process is considered.

In *maturity* models, a higher level is achieved by implementing all practices for a certain level in order to achieve the next level; the higher level is built upon the lower level. In *capability* models an organization may have implemented practices from different levels. This may be due to specific internal requirements or competitive pressures for a capability area (Carnegie Mellon, 2011). For example, no level two practices may be implemented, but it might be possible to already have level three practices implemented. In that case, the capability level is still one (because not all level two practices are implemented), but it is not required to wait with the level three practices until all lower level capabilities are implemented.

This Chapter discussed the final selection of the theoretical model, and its details. The depth and broad focus of the model shows that a scope must be applied to make it workable in IDS and in this research. The next Chapters discuss the selection of a final capability subset (the model's scope) that will be used in the remainder of this research.

5 Model's Scope Selection

The e-SCM provides a plan for measuring capabilities in an organization. It is set up for certified evaluators and should rather be performed by teams instead of individuals. A full e-SCM analysis is therefore not realistic in this research context, requiring a scope selection. In this Chapter a subset of e-SCM capabilities (the scope) is selected that will be used in the remainder of this thesis, following the structure depicted in Figure 7.

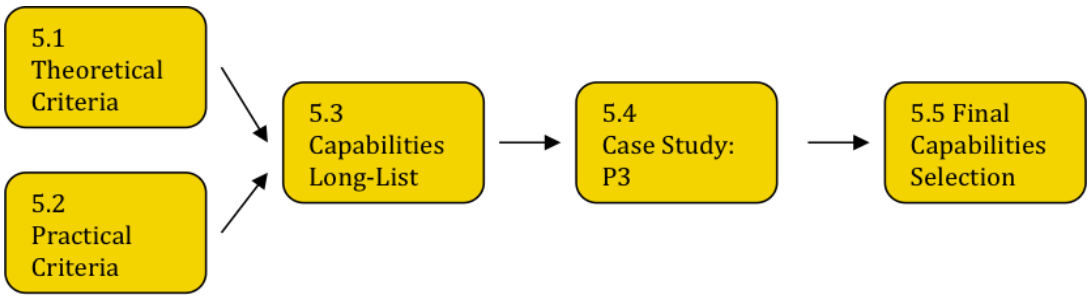


Figure 7 Structure of Chapter 5

Using theoretical and practical criteria, a long list of capabilities is selected for further analysis. Using a case study on the P3 program, the final selection of capabilities is made.

5.1 Theoretical Criteria

Sourcing success has been a popular research topic in literature. Hundreds of IT sourcing success factors have been identified in the past decades. Aiming to optimize these success factors is one way of being successful at sourcing, but one success factor may be more important then another. The same goes for sourcing capabilities. This Section describes the theoretical view on what capabilities are most important to organizations. Together with practical criteria found in the next Section, a long list of capabilities is selected.

The relationship with, and management of the service provider and a properly structured contract are often found relevant (Han, Lee, & Seo, 2008; Niekerk & Visser, 2010; Swar, Moon, Oh, & Rhee, 2010; L. P. Willcocks & Kern, 1998; Yalaho & Nahar, 2010), as well as network (infra)structure and trust (Khan, Niazi, & Ahmad, 2010; Lee, Hyunh, & Hirschheim, 2008; Min, Rong, & Tao-hong, 2010). In another recent study, three hundred Spanish organizations provided their view on outsourcing success factors resulting in again another selection (Gonzalez, Gasco, & Llopis, 2010). It requires a total literature survey to analyze all the success factors and make a selection.

Such a survey was conducted in a recent study (Lacity, et al., 2010), where over 150 independent variables for sourcing success and the sourcing decision were identified. Combining the empirically most relevant variables with the e-SCM capabilities provides good insight in which capabilities add most value.

In total 35 independent variables were found relevant for this research. Table 3 shows how many independent variables are covered per e-SCM capability and what

their weighed score is[7]. A higher score depicts a higher relevance for sourcing success. In other words, the more variables involved in a capability, the better.

The Table shows that Relationship Management proved most relevance for sourcing; Sourcing Completion proved least relevant. Although this provides a substantiated choice for selecting capabilities to measure and improve, there is also a practical side that needs consideration. The next Section considers this.

Table 3 Number of variables related to capabilities

Capability Area	Number of variables involved	Weighed score
Relationship Management	20	34.25
Sourcing Agreements	19	34
Governance Management	18	33.50
Sourced Services Management	16	29
Sourcing Opportunity Analysis	15	27.25
Threat Management	14	26.25
Service Provider Evaluation	14	25
Value Management	14	24.75
Sourcing Completion	12	22.5
Organizational Change Management	11	20
Sourcing Strategy Management	11	19.25
Sourcing Planning	11	18.5
Knowledge Management	9	17
Sourcing Approach	9	15.5
Technology Management	8	15.5
People Management	6	12
Service Transfer	5	10

5.2 Practical Criteria

This research aims at measuring and improving those capabilities that provide most benefits, and this Section analyzes potential benefits from a practical, context related viewpoint. Looking at Table 3, the top capabilities should provide most benefits to IDS, but there may be practical complications or constraints that reduce their effect.

5.2.1 Current developments

There are several developments within IDS at this point that have overlaps or parallels with capability areas. The more these capabilities are relevant for these developments, the higher value they will add. Based on interviews and internal project portfolio, five developments were found that are closely related to the e-SCM capabilities.

[7] Appendix C explains how the independent variables were identified and weighed.

Table 4 depicts how these developments relate to the capabilities.

- Improvement of supplier management. Based on an IT Services CMM measurement in 2010, the goal has been set to improve certain areas, including 'service subcontract management', which describes activities that a service provider should implement when a service is subcontracted to a third party (Niessink, et al., 2005).
- Development of a sourcing strategy and governance. Also in 2010, the Kirkman consultancy company was hired to identify activities that might be sourced by IDS and to develop a sourcing strategy. Based on the advice, sourcing governance will be set up.
- A new risk, security & quality control department. Due to several internal audits, it was found that more attention was required for risk, quality and information security control. Because of this a new department is set up to govern and audit these areas more closely.
- Shared Service Center. There are already specific plans for the unbundling of the SSC. The unbundling means IDS will take over part of the current SSC's responsibilities. One of these responsibilities is to manage the Capgemini contract. IDS will become responsible for managing this contract for Stedin, which requires good contract management.
- Plateau 3. This program is a typical sourcing program; it concerns the acquisition, implementation and management of a large IT system and only recently the first RFP (Request For Proposal) round was started for the European tender. Plateau 3 is therefore related to all capabilities.

All related capabilities are shown in

Table 4 below. There is a high relevance for Governance Management in IDS because all projects involve governance. Next, there are four capabilities related to three projects; Relationship Management, Value Management, Threat Management and Sourced Services Management.

5.3.2 Interviews

Open and semi-structured interviews were held with the CIO, the senior ICT advisor, head of architecture, head of ICT exploitation and the general IT contract manager. In these interviews specific attention was paid to discussing the nine on-going e-SCM capabilities. In all interviews, the importance of a sourcing strategy (str), sourcing governance management (gov) and relationship management (rel) was stressed. Threat management (thr) was considered relevant three times. Although not scientifically derived, these outcomes provide an interesting coherence to the above. The next Section describes the final selection.

Table 4 Relevant capabilities per project

Capability	Supplier Management	Sourcing Str / Gov	New risk department	Shared Service Center	P3	Final Score
Gov	X	X	X	X	X	38.50
Rel	X			X	X	37.25
Agr	X			X	X	37
Mgt	X			X	X	32
Thr			X	X	X	29.25
Opa		X			X	29.25
Val	X			X	X	27.74
Spe	X				X	27
Cmp					X	23.5
Ocm				X	X	22
Str		X			X	21.25
Pln					X	19.5
Knw				X	X	19
App		X			X	17.5
Tch					X	15.5
Ppl				X	X	14
Tfr					X	11

5.3 Capabilities long list

Combining the information from the previous Sections, the long list of capabilities is selected. The first basis for selection is theory; Section 5.1 explained the ranking of capabilities with the highest potential. To make the decision more practically relevant, scores are corrected for the results in Section 5.2. Each relevant project provides one extra point to the related capability. For example, Gov is relevant for all five projects and is increased by five points. Pln is only relevant for one project and is increased by one point. No additional weights were included for project size or importance.

The top five capabilities based on the new weights are Relationship Management (Rel), Sourcing Agreements (Agr), Governance Management (Gov), Sourced Services Management (Mgt), and Threat Management (Thr) (see

Table 4). Thr and Opa score equally, but the latter is highly dependent on the sourcing strategy, which is not yet formulated. Also, threat management has a higher practical relevance. For these five, a limited exploratory case study will be conducted to select the final three capabilities.

Because the RACI method is used in this research and competency profiles will be defined, it was chosen to include People Management in the selection as a sixth capability. Combined, these six capabilities cover all 35 independent variables.

5.4 Case Study: P3

In the previous Sections both a theoretical and practical approach were used to select six capabilities, the long list. Here, a limited exploratory case study is done to select those capabilities that provide most value for IDS. First, a concise introduction to the P3 program and measurement approach is provided, followed by the results and final capability selection. A more elaborate measurement approach is provided in Appendix D.

5.4.1 Plateau 3

In the introduction, Stedin´s context and history were explained. It is no longer officially connected to Eneco and is now only part of the Eneco Holding. However, some IT systems are still shared and are currently being unbundled. One example is the Marketing Sales System (MVS), which both Eneco and Stedin use. The Plateau *2* program is now running, aimed to unbundle the system. When that is achieved, Stedin wants to develop a new MVS, which is done in the Plateau 3 program. For this program documents are being defined and recently a Request For Proposal (RFP) has been published.

This typical sourcing program was selected for the case study for two reasons:

- Its size and relevance; this program costs a lot of money and is highly relevant for Stedin and IDS. Compared to other projects, this program will provide most detail for performing measurement

- It concerns a program in its starting phase. Analyzing it will also provide useable feedback on improvement areas.

5.4.2 Measurement Approach

In this case study it is measured to what extent IDS implements the long list of capabilities and this is based on internal program documents. The e-SCM describes a set of required activities per practice, which are either performed or not performed. When an activity is mentioned and described in at least one internal document, the activity is considered as performed. When no reference to the activity is found, the activity is considered as not performed. Then, the number of activities per practice was counted, resulting in an implementation percentage.

The practices are listed per capability in

Table 5 with their respective implementation percentage. These concern level two practices for each capability, i.e. practices that have a single project as its scope. Higher levels cannot be measured in this case study, because they concern the entire organization and not a single project.

The full measurement approach and instrument can be found in Appendix D.

Finally, note that conclusions are only drawn for P3. If a practice is not implemented in P3 it should not be concluded that it is never implemented in IDS.

5.4.3 Results

Results (

Table 5 and Figure 8) show that IDS is not incapable of sourcing (full overview available in Appendix D). Three of the six capabilities score above fifty percent and some practices are completely implemented. There is room for improvement, especially in people, threat and agreement management. As an example of the measurement, practice Mgt04 is described; it consists of four activities:

1. Monitor agreement compliance
2. Communicate information regarding agreements
3. Monitor the requirements of the agreements for potential revisions to the agreements
4. Perform agreement management and administration functions for the agreements with service providers

The e-SCM describes (1) as monitoring whether the service provider commits to the agreement and what to do when agreements are not achieved. In the RFP document, there are specific plans for this including a 'bonus malus system'. This system is used for giving the provider a bonus for good results and penalties for bad results. (2) is focused on communicating the agreements to relevant stakeholders. This was mentioned in none of the documents and was considered absent. On activity (3), the e-SCM provides no further details and no references could be found in the internal documents. It was therefore considered absent. An example of activity (4) is version control and discussing possible changes to agreements. Here, the RFP document provides an overview of periodic meetings in which these activities are included.

Concluding, two of the four activities of Mgt04 are considered present, resulting in an implementation percentage of 50%.

Note that this measurement is intended to indicate what IDS already pays attention to in one program and that it serves as a tool to select the final capabilities; it should not be considered an official and complete evaluation.

Overall, it can be concluded that there is insufficient focus on people's competencies, especially of the program and project members. Threat management scored low because there is a minimal focus on intellectual property, security, privacy and business continuity threats.

Most practices are focused on documenting and planning activities, but agreement management is implemented when specific tasks such as a negotiation are performed. It can therefore not yet score much higher then it currently did.

Governance management towards the external party is well implemented, but internal stakeholder management scored much less, resulting in a medium implementation. Relationship- and sourced services management score highest because fixed periodic interactions are already planned and IDS has a strong focus on service level management.

Table 5 Practice Implementation Percentage

Practice	%	Practice	%
Gov02 - Service Provider Management	75	Agr04 - Agreement Roles	33
Gov03 - Internal Stakeholder Management	33	Agr05 - Define SLAs & Measures	100
Rel01 - Service Provider Interactions	64	Agr06 - Create Agreements	83
Rel04 - Issue Management	80	Agr07 - Amend Agreements	17
Ppl01 - Assign Sourcing Responsibilities	14	Mgt01 - Perform Sourcing Management	70
Ppl02 - Personnel Competencies	0	Mgt02 - Performance Monitoring	80
Thr01 - Sourcing Risk Management	67	Mgt03 - Financial Management	67
Thr03 - Intellectual Property	11	Mgt04 - Agreement Management	50
Thr04 - Security & Privacy	0	Mgt05 - Problem & Incident Monitoring	71
Thr05 - Compliance	57	Mgt06 - Service Delivery Change Management	100
Thr06 - Business Continuity	13	Mgt07 - Service Change Management	86
Agr02 - Confirm Existing Conditions	17	Mgt08 - Review Service Performance	83
Agr03 - Negotiations	0	Mgt011 - Continuation Decision	38

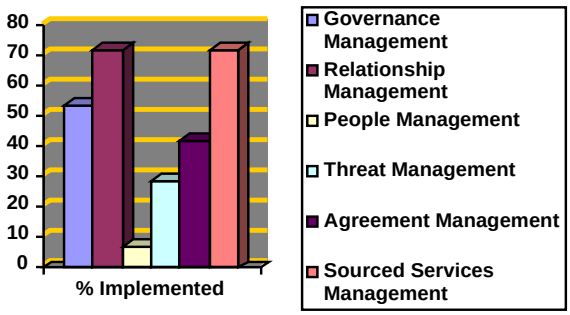


Figure 8 Capability Level Two Measurement

Finally, some practices are highly implemented which seems to contrast with the main problem statement. Several remarks are in place:

- Measurement is based on program plans and it is unsure whether the plan is completely executed.
- Measurement concerns level *two* practices focused on a single project. In P3, issue management receives much attention (80% implementation), but there is no standard approach on an organizational level. It is performed completely ad hoc.
- P3 is the largest program that IDS is performing. It proved an interesting case, but the level of detail is lower in other projects.

The next Section describes how these results lead to the final capability selection.

5.5 Final Capabilities Selection

The previous Section provided good insight in the current focus areas of IDS in the P3 program. Based on the insights, the final selection of three capabilities is made. The focus of this research is to advise on level *three* practices. Implementing level three practices is less difficult when level two practices are already in place. A relatively high implementation percentage is therefore preferred (see Figure 8). This leads to the selection of the following capabilities.

5.5.1 Relationship Management

The relationship with the sourcing partner is the most important predictor of sourcing success as found in the previous Chapter. In most interviews and conversations with IDS personnel, the relevance of improving it was argued. In the P3 measurement, relationship was one of the most implemented capabilities on level two. Relationship Management was therefore selected as the first capability.

5.5.2 Sourced Services Management

Sourced Services Management includes every activity that is performed during the contract. This means nearly all on-going capabilities are involved, including governance, threat management and relationship management. Because of the relatively high implementation of level two practices, Sourced Services Management is selected as the second capability.

5.5.3 Governance Management

The third capability is Governance Management. It has close relation to Sourced Services Management as it sets the boundaries and guidelines within which sourcing is performed. Besides its top three implementation percentage, it proved relevant for all running projects (see Section 5.2.1). Also, there is IT governance set up using the demand supply model, but it is not yet specified for sourcing.

The combination of these three is supported by literature: A recent study found contractual governance (Sourced Services Management & Governance Management) and relational governance (Relationship Management) are complementary and strongly relate to sourcing success (Lacity, Khan, & Willcocks, 2009). Together they provide a good mix for use in the SSC unbundling and they cover 31 of the 35 significant variables.

The other three capabilities score lower on level two. This means they require attention from IDS, but directly implementing them on level three is more difficult.

6 RACI Analysis

In this Chapter, the RACI method is applied to three situations; current IDS, current SSC and ideal IDS. By comparing these RACIs, the differences in responsibilities, roles and activities between the three situations are analyzed. In this Chapter, the structure depicted in Figure 9 is followed.

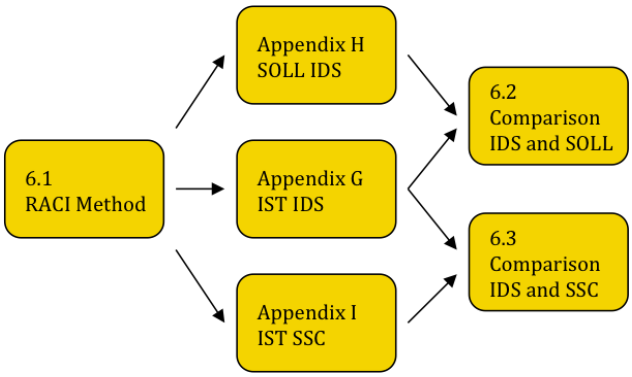


Figure 9 Structure of Chapter 6

The Chapter starts by explaining the RACI structure. Then, three RACIs are developed, for current IDS (IST), future IDS (SOLL) and current SSC. These are added in Appendices. Then, a comparison is made between the IDS IST and SOLL and the IDS IST and SSC IST. This Chapter concludes by describing competency profiles (Section 6.4) for the selected roles. These will help in selecting the most suitable employee for a role.

6.1 RACI Method

In Section 2.3.4 the RACI method has been explained. In this Section, the activities and roles specific to this context are explained.

6.1.1 Activities

The first step in a RACI is to define activities. Here, the activities follow from the selected e-SCM capabilities; Governance Management, Relationship Management and Sourced Services Management. Appendix E shortly describes each of the related practices. Each practice consists of several required activities, which can be found in the e-SCM documentation.

6.1.2 Roles

The vertical side of the RACI mentions the roles involved; “what roles do we need to perform these activities?”. They are based on COBIT (IT Governance Institute, 2007) and Beulen et al. (2006). COBIT defines several roles per practice, and adds or leaves out some when they are not necessary. Beulen et al. studied roles required for sourcing. Besides the roles, he defined the interactions between them.

Because not all roles proved relevant for IDS, a selection has been made. First, the different roles defined by both models were compared to the current situation at IDS. Second, an analysis was made which roles were missing and they were added to the RACI. This means that some roles do not exist in the IST, where they do in the SOLL. This analysis already provided a useful insight. Roles are explained in

Table 6 below.

Table 6 Explanation of RACI roles

Role	Explanation	Level
CEO	Highest executive within Stedin. The final accountable employee.	Strategic
CIO / IT Director	Managers and heads of IDS. They carry final responsibility for activities and strategy of IDS.	Strategic
IT Architect	Responsible for high-level technical architectures and business processes within IDS. Is often supportive in projects and new developments.	Strategic / Tactical
Sourcing Process Manager	Responsible for sourcing processes in general. Sets standards and guidelines for all sourcing activities. Does this for all sourcing activities and not for a specific contract.	Tactical
Project Manager	Responsible for managing projects and the individual activities.	Operational / Tactical
Portfolio Manager	Manages the overview of all projects, their relations and financial goals.	Strategic / Tactical
Contract Manager	Manages all contracts, makes sure invoices are paid and that services are delivered. Is the contact for service providers on a strategic level.	Strategic / Tactical
Service Manager	Manages service levels of service providers and the internal IT department. The contact for service providers on a tactical level.	Operational / Tactical
Account Manager	Tactical level contact for the internal customer and responsible for customer satisfaction.	Operational / Tactical
IT Professionals	All IT professionals within IDS. They have contacts with their service provider and internal customer on an operational level. They also perform operational tasks such as application management.	Operational
Information Manager	Translate the needs of the business towards requirements for IDS. Service levels are agreed on with the Account Manager that makes sure services are delivered.	Tactical
Service Provider	The external party that provides services to IDS. There is interaction with contract management, service management and IT professionals.	Operational / Tactical / Strategic
Purchaser	Responsible for performing the financial activities in sourcing. Negotiates pricing with the service provider.	Tactical

These roles are different from the actual functions and departments within IDS and IDS, but provide a clearer separation of responsibilities. For example, there are several expert functions within IDS, e.g. SAP, BI and Integration Solutions. Since each has some form of contact with their respective software provider, they all share a responsibility. By defining the 'IT Professional' role, responsibility is placed at a single role. The IT professional in practice may then be a SAP expert or a BI expert. The exact mapping of roles to Stedin and IDS departments is shown in Appendix F.

Finally, each role acts on a specific level, i.e. strategic, operational or tactical. This is depicted in

Table 6 and below in Figure 10. Figure 10 shows the so-called demand supply model (Beulen, 2005). Demand is represented by a pure business and a demand side, where the latter translates the needs of the business for the supply side. Supply is

represented by a delivery and supply side; delivery is responsible for matching the demand with the technical supply and performs activities such as requirements engineering and system design. Supply then performs the actual IT services.

The Service Provider is an external party and there is no general control over its activities. It therefore covers all levels. The CIO / IT Director is in the board with the CEO and performs strategic demand, as well as strategic delivery. Most other roles occur on tactical delivery; a higher place in the figure depicts a more close relation to strategic delivery. A lower place in the figure depicts a more close relation to operational delivery. Two cells in the matrix are left blank, i.e. operational business and demand. They are foremost end users and have no direct influence or responsibility for sourcing. Their contact with the supply side is purely operational, e.g. a helpdesk call. When problems occur, they are discussed on a tactical level via the information manager

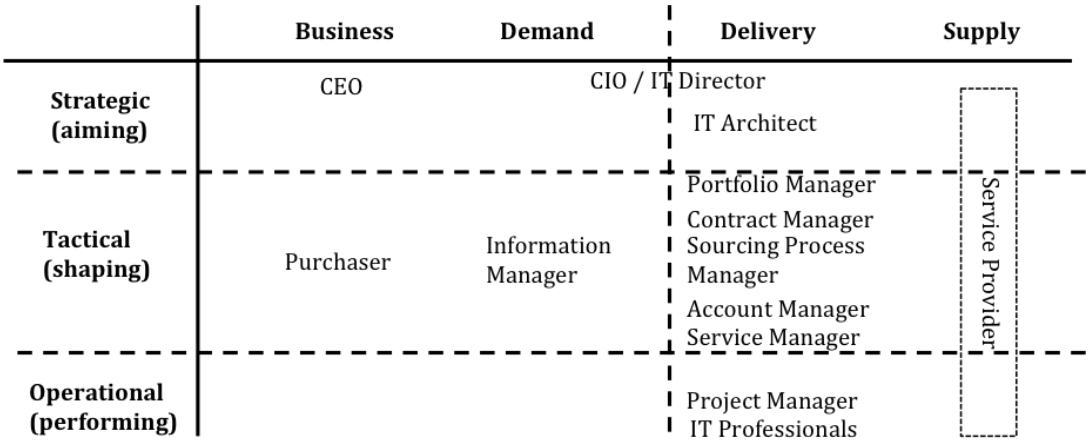


Figure 10 Roles divided over strategic, tactical and operational levels

This overview is used as a tool to compare the IST and SOLL. For example, it may prove that the IT professional is defining sourcing processes. According to the role definitions, this should be the task of the sourcing process manager. Using this overview shows that tactical activities are performed on an operational level, which is undesirable.

6.1.3 Further structure

Previous sub-sections defined all roles and activities used in the different RACIs. The following Sections will discuss two comparisons. First, between the IDS IST and IDS SOLL; second, between the IDS IST and SSC IST. Before these comparisons could be made, the individual RACIs were required. A full explanation of each RACI's approach and results is provided in Appendix G through I for IDS IST, IDS SOLL and SSC IST respectively. A high level overview of the RACIs is provided there, detailed RACIs are provided in the following Sections.

6.2 Comparison IDS and SOLL

Using RACI, the IDS IST and IDS SOLL were identified (see also Section 2.3.4 or Appendix G and H). In this Section, the two are compared to find what improvements IDS should make to solve the main problem. First, the comparison is explained, followed by an overview of the most important differences. The conclusion and advice are provided in following Chapters.

6.2.1 RACI comparison

To present the differences as clearly as possible, the IST and SOLL RACI were placed on top of each other. The combined RACI is shown in Table 7. The formatting requires some explanation to separate IST from SOLL. Horizontal bars for the capabilities and practices are colored grey and yellow and depict the table's structure. Four additional formatting styles exist in the Table for the comparison:

Regular cell with thick, black borders: the IST and SOLL are identical and hold the same responsibility
Black cell with white text: both IST and SOLL mention a responsibility, but they differ. The notation used is [SOLL-IST]
Grey cell with white borders and white text: there is no responsibility in the SOLL, but there is in the IST.
All other cells that hold values: there is responsibility in the SOLL, but it does not exist in the IST.

Note that the SOLL includes R, A, C and I roles and that the IST is limited to the A and R roles. The most important differences are discussed below, per practice.

Gov01 – Sourcing Policy
As discussed earlier, there is not yet a documented sourcing policy. The RACI shows a responsibility at the CIO / IT Director for setting this up; this is being done together with Kirkman, but has not yet been finished. For the related activities Gov02 and Gov04, the service managers are currently responsible. This should be the responsibility of the sourcing process manager.

From the perspective of Figure 10 in Section 6.1.2, it shows that these responsibilities should be placed on a strategic/tactical level whereas they currently are on an operational/tactical level.

Gov04 – Defined Sourcing Processes
No activities are performed for this practice in the IST. Gov04 is focused on having a 'script' for sourcing, but all interviewees stressed that such a script does not exist for any sourcing process. The RACI shows that the responsibility for this practice ideally lies with the sourcing process manager, but this role does not exist within IDS.

Table 7 Detailed level comparison of IST and SOLL

Activity-code	Description	CEO	CIO/IT Director	IT Architect	Sourcing Process Manager	Project Manager	Portfolio Manager	Contract Manager	Service Manager	Account Manager	IT Professionals	Information Manager	Service Provider	Purchaser
Gov	Governance Management	A	R	C-R	C	C	C	C	C	C	C	C	I	C
Gov01	Sourcing Policy		A/R	C	R	C	C	C	C-R	C	C	C		C
Gov01-1	Document Sourcing Policy		A/R	C	C	C	C	C	C	C	C	C		C
Gov01-2	Create systems, mechanisms and processes for guiding and managing sourcing		A	C	R	C	C	C	C-R	C	C	I		C
Gov01-3	Define and implement organization's sourcing functions		A/R		C			I	I	I	I	C		
Gov01-4	Create and implement guidelines for implementing Service Level Management approaches		A		R				I-R			C		
Gov04	Defined Sourcing Processes		A		R	I	I	R	C		C	C	I	
Gov04-1	Establish and maintain set of sourcing processes and process assets for use across the organization		A		R	I	I	I	C		C	C		
Gov04-2	Determine measures to track sourcing process performance		A		R			C	I		I	C	I	
Gov04-3	Establish a measurement repository to contain the data collected for process assets		A		R				I			I		
Gov04-4	Document tailoring guidelines for the process assets: when is it allowed to tailor it		A		R			C				C		
Gov04-5	Plan and track implementation of documented sourcing processes across the organization		A		R			I	I		I	I		
Gov04-6	Review tailoring of the process assets		A		R							I		
Gov04-7	Create a plan for verifying processes		A		R							C		
Gov04-8	Collect data on sourcing process performance		A					R	C			I		
Gov04-9	Periodically review the sourcing activities compared to the defined processes		A		R							I		
Gov04-10	Review adherence of work products to specified requirements at identified times		A		R							I		
Gov04-11	Document and communicate nonconformance of processes or work products to relevant stakeholders		A		R			I	I	I	I	I		
Gov04-12	Track status and progress against the plan for verifying processes		A		R							I		

Gov05	Align Strategy & Architectures		A	R-A/R				R			C	C	C	
Gov05-1	Review organization's business strategies and plans		A	I-A/R				R				C		
Gov05-2	Review organization's information technology strategy and plans		A	I				R						
Gov05-3	Define technical architecture that supports sourced services and modifications to them		A	R								I		
Gov05-4	Align information technology capability with sourced services and modifications to them		A	R								I		
Gov05-5	Ensure that business processes performed as sourced services are consistent and integrated with business processes		A	R				C			C	C	C	
Gov05-6	Ensure that organization's sourced services comply with the organization's technology policies and standards		A	R				C			C	I	C	
Gov06	**Business Process Integration**		**A**	**C**	**C**	**R**		**R**	**C-R**	**C**	**C**	**A**	**C**	
Gov06-1	Identify contact personnel from the client organization, service provider, and involved third parties		A			R		R	I-R	I	I	A	C	
Gov06-2	Identify and analyze process components required for integration		A	C	C	R		R	R		C	A	C	
Gov06-3	Identify performance measures of the integrated business processes		A		C	R		R	C	C		A	C	
Gov06-4	Create a plan for integrating business processes		A		C	R		R	C-R	C	C	A	C	
Gov06-5	Track status and progress against the plan, according to defined tracking methods		A			R		R	C	C	C	A	C	
Gov07	**Adapt to Business Change**		**A**		**R**	**I-R**	**R**	**R**	**I-R**	**C**	**C**	**C**	**C**	
Gov07-1	Create an approach to identify and review proposed changes to services and processes		A		R	R		C	R			C	C	
Gov07-2	Identify potential changes to services and processes		A			R		R	C-R	C	C	C	C	
Gov07-3	Obtain review and approval from relevant stakeholders for proposed changes to services or service levels		A					R	R					
Gov07-4	Create service modification requests for approved changes		A			I	I	R	C	C	C	C	C	
Gov07-5	Review sourcing objectives and strategies for appropriateness, as business changes occur		A		C	R	R	C						
Gov07-6	Review sourcing policies and processes for appropriateness, periodically or as business changes occur		A		C	R	R	C				C	C	

Activity-code	Description	CEO	CIO/IT Director	IT Architect	Sourcing Process Manager	Project Manager	Portfolio Manager	Contract Manager	Service Manager	Account Manager	IT Professionals	Information Manager	Service Provider	Purchaser
Rel	**Relationship Management**	**A**	**R**		**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**
Rel02	**Service Provider Relationships**		**A**		**R**	**R**	**C**	**R**	**R**		**R**	**C**	**R**	**R**
Rel02-1	Define and build relationship management approach		A		R	C	C	C	C		C	C		I
Rel02-2	Identify key contact personnel for the organization and selected service providers		A			R		R	R			C	C	
Rel02-3	Establish relationships with the service provider's contact personnel		A			R		R	R		R		R	R
Rel02-4	Provide regular channels of communication with service providers		A			R		R	R		R		R	R
Rel02-5	Track status of the relationships, taking action when appropriate		A			R		R	R		R		R	R
Rel02-6	Periodically review the agreement and the status of the relationship with each service provider, and take action as appropriate		A			R		R	R		R		R	R
Rel03	**Internal Relationships**		**A**		**R**	**R**	**C**	**R**		**R**	**C**	**R**		
Rel03-1	Identify internal functions and roles crucial to managing the relationship and service delivery for each sourced service		A		R	C	C	C		C-R	C	C		
Rel03-2	Identify key contact personnel for the sourcing organization and selected functions		A			R		R		I-R	I	R		
Rel03-3	Define the roles and responsibilities of the sourcing organization's contact personnel in regard to internal relationships		A			R		R		I-R	I	R		
Rel03-4	Establish relationships with the internal contact personnel, functions and roles		A			R		R		R		R		
Rel03-5	Provide regular channels of communication with identified functions and roles		A			R		R		R		R		
Rel03-6	Participate with internal functions to meet their business requirements		A			R		R		R		R		
Rel03-7	Track the status of internal relationships, taking action when appropriate		A			R		R		R		R		

Rel05	**Cultural Fit**		**A**			**R**		**R**	**C**	**C**	**C**	**C**	**C**	**C**
Rel05-1	Identify potential interactions between client organization, service providers, internal stakeholders, third parties and customers		A			R		R	C	C	C	C	C	C
Rel05-2	Identify the cultural attributes that affect the organization's performance during interactions		A			R		R	C	C	C	C	C	C
Rel05-3	Identify the cultural gaps for each of the identified attributes		A			R		R						
Rel05-4	Analyze the effect and possible consequences of cultural gaps on relationships and the sourced service		A			R		R						
Rel05-5	Identify actions required to achieve cultural fit		A			R		R						
Rel05-6	Create a plan to achieve cultural fit		A			R		R	I	I	I	I	I	I
Rel05-7	Obtain feedback on the plan from relevant stakeholders, and modify when appropriate		A			R		R	C	C	C	C	C	C
Rel05-8	Track performance against the plan for achieving a cultural fit		A			R		R	C	C	C	C	C	C
Mgt	**Sourced Services Management**	**A**	**R**		**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	
Mgt09	**Stakeholder Feedback**		**A-A/R**		**C**	**R**		**R**	**C-R**	**C-R**	R	**C**	**C**	
Mgt09-1	Identify types of stakeholder information that need to be collected and analyzed		A			R		R	C	C		C	C	
Mgt09-2	Identify attributes that require client and other stakeholder feedback		A			R		R	C	C		C	C	
Mgt09-3	Identify sources for stakeholder information		A			R		R						
Mgt09-4	Periodically collect and maintain the identified stakeholder information					R		R	R					
Mgt09-5	Analyze collected stakeholder information		A-A/R		I	R		R	I	I		I	I	
Mgt09-6	Use stakeholder information, as appropriate		A		C	R		R	C-R	C-R	R	C	C	
Mgt10	**Service Value Analysis**		**A**			**R**	**R**	**R**	**R**	**I**	**R**	**R**	**R**	
Mgt10-1	Maintain and review the business case that documents how the service provider supports the organization's objectives		A				R	R				I		
Mgt10-2	Identify attributes of the business case and service provider performance to examine based on organizational objectives and client input		A				R	R	C			I		
Mgt10-3	Create the approach used for comparing data between the service provider performance and the business case		A				R	R	C			I		
Mgt10-4	Compare service provider performance to business case targets, identifying value leakage		A				R	R				I		
Mgt10-5	Document results of the value analysis		A				R	R	I	I	I	I	I	
Mgt10-6	Identify improvements that are needed when value leakage occurs		A				R	R	I	I	I	I	I	
Mgt10-7	Participate in service improvement programs to address identified improvements		A			R		R	R		R	R	R	

Gov05 – Align Strategy & Architecture

There is no alignment between strategy and architecture from a sourcing perspective, because all but one activities are empty for the IST. IDS works under architecture, has developed a goal architecture and is working on a roadmap. These however are focused on business and IT alignment and do not include sourcing processes and systems. Even more, the current responsibility that the IT architect has should be the responsibility of the contract manager.

Gov06 – Business Process Integration

Correctly the business is accountable for business process integration; they are the owner of the process as depicted by the thick-bordered cells. Executive responsibility for the preparation however, lies with the service manager. This should be the responsibility of the contract manager or, when in a project, of the project manager. Compared to Figure 10, the level of responsibility is ok, but responsibilities lay with the wrong role.

Gov07 – Adapt to Business Change

Most of the Gov07 activities are performed and some responsibilities are correct (the thick-bordered cells). However, the service manager receives too much responsibility, and the contract manager is minimally involved. Also, the practice is too often a responsibility of the project manager. It should be the task of the contract manager to know when an adaptation is required. A potential adaptation should then be proposed to the portfolio manager who decides to start a project. The project manager should not be responsible for these activities.

Rel02 - Service Provider Relationships

Stedin is already active in sourcing and has relationships to manage. Although contact persons are known and regular communication occurs, there is no general consensus on how to manage the relationship (Rel02-1 is blank). It is done ad hoc and based on teaming between the contract and service level manager. The relationship management approach should be the responsibility of the sourcing process manager, which does not exist. The RACI also shows that reviewing of agreements and relationship status does not occur.

Rel03 - Internal Relationships

There is considerable management of internal relationships. All activities are performed (thick-bordered), but not according to a predefined process and mainly by the service manager. The contract manager has no internal relationships and the project manager is minimally involved. Also, the first activity should not be the responsibility of the service manager, but of the sourcing process manager.

Rel05 – Cultural Fit

Cultural fit is not pursued by IDS since Rel05 is completely blank. There is attention for it internally, but not with service providers or the business. There were activities that, unknowingly, might help in improving the cultural fit. For example, when a service provider was very passive, IDS adjusted to their way of working by becoming more pro-active, but this occurred ad hoc.

Mgt09 – Stakeholder Feedback
Within IDS there is some attention for stakeholder feedback. There are customer and employee satisfaction measurements, but in terms of sourcing this is limited. Again the service manager plays a part in analyzing data instead of the contract manager. He should be consulted, but is now responsible as the black cell indicates. Also, project management should be responsible for project related feedback.

Mgt10 – Service Value Analysis
Mgt10 analyzes whether the performance of a service provider coheres with the expected benefits that were stated in the sourcing business case. Although internal and external service levels are managed, the business case is never reviewed after it has been executed (Mgt10 is almost completely blank). The last activity of this practice, improvement programs, is performed and by the correct roles, but not from a business case perspective.

This Section discussed the comparison of the IDS IST and IDS SOLL RACI, showing the many differences between the two. All findings will be summarized in the next Chapter, the conclusion. The next Section explains the comparison with the SSC and its results.

6.3 Comparison IDS and SSC

In the Introduction it was already explained that the IT Shared Service Center is expected to be unbundled in the coming years. Although the project is currently on hold, the comparison with IDS provides 1) useful insights for the unbundling and 2) an interesting comparison of IDS with another organization with the same background (both originate from Eneco). The Section starts by providing the comparison, followed by a discussion of their differences.

6.3.1 RACI Comparison

Table 8 below shows the two IST RACIs combined. Information on the development of the SSC IST RACI can be found in Section 2.3.6 or Appendix I. The notations used are equal to the previous RACI comparison:

Regular cell with thick, black borders: both RACIs are identical and hold the same responsibility
Black cell with white text: both RACIs mention a responsibility, but they differ. The notation used is [IDS IST-SSC IST]
Grey cell with white borders and white text: there is no responsibility in the IDS IST, but there is in the SSC IST.
All other cells that hold values: there is responsibility in the IDS IST, but it does not exist in the SSC IST.

Each of the ten practices is discussed below, explaining the differences.

Gov01 – Sourcing Policy
IDS is developing a sourcing policy, but this is not the case in the SSC; there are no guidelines, and decisions are made ad hoc. Gov01 is completely blank in the SSC.

Gov04 – Defined Sourcing Process
Equally to IDS, the SSC has no fixed sourcing process and works ad hoc. For both, Gov04 is completely blank. The contract managers however, mentioned that they often use the Capgemini contract as a reference model for decisions or approaches.

Gov05 – Align Strategy and Architecture
As the grey cells indicate, architecture alignment with sourcing scored high compared to IDS. Detailed architectures were available and were used when technical changes were required. Also, service managers and IT professionals are involved in process consistency. IDS is still highly developing in this area.

Gov06 – Business Process Integration
Contrary to IDS, the SSC director acts as the accountable role for this practice; it is mainly executed by the contract manager (grey cells). In Stedin, the Information Manager is considered accountable.

Table 8 Detailed level comparison of IDS IST and SSC IST

Activity-code	Description	CEO	CIO/IT Director	IT Architect	Sourcing Process Manager	Project Manager	Portfolio Manager	Contract Manager	Service Manager	Account Manager	IT Professionals	Information Manager	Service Provider	Purchaser
Gov	**Governance Management**	**A**	**R**									**R**		
Gov01	**Sourcing Policy**		**A/R**						**R**					
Gov01-1	Document Sourcing Policy		A/R											
Gov01-2	Create systems, mechanisms and processes for guiding and managing sourcing		A						R					
Gov01-3	Define and implement organization's sourcing functions													
Gov01-4	Create and implement guidelines for implementing Service Level Management approaches		A						R					
Gov04	**Defined Sourcing Processes**													
Gov04-1	Establish and maintain set of sourcing processes and process assets for use across the organization													
Gov04-2	Determine measures to track sourcing process performance													
Gov04-3	Establish a measurement repository to contain the data collected for process assets													
Gov04-4	Document tailoring guidelines for the process assets: when is it allowed to tailor it													
Gov04-5	Plan and track implementation of documented sourcing processes across the organization													
Gov04-6	Review tailoring of the process assets													
Gov04-7	Create a plan for verifying processes													
Gov04-8	Collect data on sourcing process performance													
Gov04-9	Periodically review the sourcing activities compared to the defined processes													
Gov04-10	Review adherence of work products to specified requirements at identified times													
Gov04-11	Document and communicate nonconformance of processes or work products to relevant stakeholders													
Gov04-12	Track status and progress against the plan for verifying processes													

Gov05	**Align Strategy & Architectures**		A	**A/R-R**					R		R					
Gov05-1	Review organization's business strategies and plans		A	A/R-R												
Gov05-2	Review organization's information technology strategy and plans															
Gov05-3	Define technical architecture that supports sourced services and modifications to them		A	R												
Gov05-4	Align information technology capability with sourced services and modifications to them		A	R												
Gov05-5	Ensure that business processes performed as sourced services are consistent and integrated with business processes		A						R		R					
Gov05-6	Ensure that organization's sourced services comply with the organization's technology policies and standards															
Gov06	**Business Process Integration**		A			**R**		R	**R**			**R**				
Gov06-1	Identify contact personnel from the client organization, service provider, and involved third parties		A			R		R	R			A				
Gov06-2	Identify and analyze process components required for integration		A			R		R	R			A				
Gov06-3	Identify performance measures of the integrated business processes															
Gov06-4	Create a plan for integrating business processes		A			R		R	R			A				
Gov06-5	Track status and progress against the plan, according to defined tracking methods		A			R		R				A				
Gov07	**Adapt to Business Change**		**A**			**R**	**R**	**R**	**R**			A/R				
Gov07-1	Create an approach to identify and review proposed changes to services and processes		A			R		R	R							
Gov07-2	Identify potential changes to services and processes		A			R			R			A/R				
Gov07-3	Obtain review and approval from relevant stakeholders for proposed changes to services or service levels		A			R			R			A/R				
Gov07-4	Create service 49modification requests for approved changes					R		R				A/R				
Gov07-5	Review sourcing objectives and strategies for appropriateness, as business changes occur		A			R	R	R								
Gov07-6	Review sourcing policies and processes for appropriateness, periodically or as business changes occur		A			R	R									

Activity-code	Description	CEO	CIO/IT Director	IT Architect	Sourcing Process Manager	Project Manager	Portfolio Manager	Contract Manager	Service Manager	Account Manager	IT Professionals	Information Manager	Service Provider	Purchaser
Rel	**Relationship Management**	**A**	**R**											
Rel02	**Service Provider Relationships**		**A**			**R**		**R**	**R**		**R**			
Rel02-1	Define and build relationship management approach													
Rel02-2	Identify key contact personnel for the organization and selected service providers		A			R		R	R		R			
Rel02-3	Establish relationships with the service provider's contact personnel		A			R		R	R		R			
Rel02-4	Provide regular channels of communication with service providers		A			R		R	R		R			
Rel02-5	Track status of the relationships, taking action when appropriate		A			R		R	R		R			
Rel02-6	Periodically review the agreement and the status of the relationship with each service provider, and take action as appropriate		A			R		R	R		R			
Rel03	**Internal Relationships**		**A**			**R**				**R**	R			
Rel03-1	Identify internal functions and roles crucial to managing the relationship and service delivery for each sourced service		A							R				
Rel03-2	Identify key contact personnel for the sourcing organization and selected functions		A			R				R				
Rel03-3	Define the roles and responsibilities of the sourcing organization's contact personnel in regard to internal relationships		A							R				
Rel03-4	Establish relationships with the internal contact personnel, functions and roles		A			R				R				
Rel03-5	Provide regular channels of communication with identified functions and roles		A			R				R	R			
Rel03-6	Participate with internal functions to meet their business requirements		A							R	R			
Rel03-7	Track the status of internal relationships, taking action when appropriate		A							R				

Rel05	**Cultural Fit**													
Rel05-1	Identify potential interactions between client organization, service providers, internal stakeholders, third parties and customers													
Rel05-2	Identify the cultural attributes that affect the organization's performance during interactions													
Rel05-3	Identify the cultural gaps for each of the identified attributes													
Rel05-4	Analyze the effect and possible consequences of cultural gaps on relationships and the sourced service													
Rel05-5	Identify actions required to achieve cultural fit													
Rel05-6	Create a plan to achieve cultural fit													
Rel05-7	Obtain feedback on the plan from relevant stakeholders, and modify when appropriate													
Rel05-8	Track performance against the plan for achieving a cultural fit													
Mgt	**Sourced Services Management**	**A**	**R**											
Mgt09	**Stakeholder Feedback**		**A/R-A**					**R**	**R**	**R**	**R**			
Mgt09-1	Identify types of stakeholder information that need to be collected and analyzed		A/R											
Mgt09-2	Identify attributes that require client and other stakeholder feedback		A/R						R					
Mgt09-3	Identify sources for stakeholder information		A/R											
Mgt09-4	Periodically collect and maintain the identified stakeholder information		A						R					
Mgt09-5	Analyze collected stakeholder information		A/R						R					
Mgt09-6	Use stakeholder information, as appropriate		A-A/R					R	R	R	R			
Mgt10	**Service Value Analysis**		**A-A/R**			**R**		**R**	**R**		**R**			
Mgt10-1	Maintain and review the business case that documents how the service provider supports the organization's objectives													
Mgt10-2	Identify attributes of the business case and service provider performance to examine based on organizational objectives and client input		A/R											
Mgt10-3	Create the approach used for comparing data between the service provider performance and the business case													
Mgt10-4	Compare service provider performance to business case targets, identifying value leakage		A/R											
Mgt10-5	Document results of the value analysis													
Mgt10-6	Identify improvements that are needed when value leakage occurs		A/R											
Mgt10-7	Participate in service improvement programs to address identified improvements		A			R		R	R		R			

Gov07 – Adapt to Business Change
In the SSC, when a project is started, a general project plan is consulted to set it up. This includes the check whether service providers are involved because of changes. The project manager, service manager and information manager are responsible for analyzing and reviewing them. Within IDS, such checks are not performed.

Rel02/03 – External and Internal Relationships
Internal and external relationships are almost equal, except that the SSC is more active in external relationships. Still, both perform the activities ad hoc and have no relationship management approach.

Rel05 – Cultural Fit
Both have no plans for cultural fit as all Rel05 cells are blank. Interviewees at the SSC mentioned that in past years there was sometimes an explicit focus on culture. Currently, one project is running in which culture plays a role, but it is more of an exception than standard procedure.

Mgt09 – Stakeholder Feedback
The SSC is more active in stakeholder feedback than IDS as depicted by the grey cells. The main reason is that the SSC performs customer satisfaction studies under end users, their customers. It is their only formalized stakeholder feedback, but more are being developed. Within IDS there are no formalized stakeholder feedback analyses. IDS does use stakeholder feedback, as depicted by the thick-bordered line, based on the SSC's feedback surveys.

Mgt10 – Service Value Analysis
The business case is never formally reviewed in both IDS and SSC. However, on a management level in the SSC, 'sometimes' a review is performed. This is depicted by the grey cells, and is mostly performed ad hoc.

Although the differences between the SSC and IDS are less remarkable than between IDS and the SOLL, interesting results have been found. In some areas, the SSC is more structured, e.g. in architecture and stakeholder feedback. In other areas, they are very much alike, e.g. cultural fit, governance and processes.

The next Section will discuss the development of competency profiles for the RACIs roles. These will help IDS to select the right employees for the future situation.

6.4 Competencies

Previous Sections discussed the two comparisons of the three RACIs. To support the transition towards the SOLL, competency profiles have been set up for the roles based on future activities and responsibilities. This Section describes the development of eleven competency profiles to support employee selection at Stedin.

6.4.1 Approach

In order to find and select the best employee for a role, Stedin human resources uses an online assessment tool as explained in the theoretical background. Setting up competency profiles for the roles and activities in the RACI provides Stedin with an easy first step to analyze employee need. It was chosen not to formulate a profile for the CEO and service provider because of their position.

First, using the HFM Talent Index a maximum of twelve competencies was selected for each role, the long list. Second, in line with the HFM Talent Index and the IS Business Smarts (Abel, 2005), each of the twelve competencies was marked as Being Developed, Basic, Initial, Advanced or Expert (a five-scale range). Third, a shortlist of eight competencies was selected for each role. By only maintaining the most relevant (Advanced and Expert) rankings, the final eight were selected. Appendix K shows the long- and shortlist with their respective markings.

Next, a competency profile was set up per role based on the selected competencies. The HFM Talent Index includes a profile template with the following order:

1. Role's competencies
2. Function information (consisting of results, tasks, knowledge and experience)
3. Competency's definition, behavior and goal

1) is filled with the selected competencies and their description. 2) is filled by identifying the four sub-areas based on the role's activities according to the RACI. 3) is a more elaborate description of the competency, including behavioral anchors, and describes the goal specifically for this role. The latter is needed because the competencies itself are generic.

In this thesis not all profiles are added because they are written in Dutch. However, one profile (the service manager) was translated to English and added to form as an example. It is added in Appendix L.

6.5 Conclusion

This Chapter discussed two comparisons of the three RACIs, first between current IDS and future IDS and second, between current IDS and current SSC. The differences proved interesting, but have to be made useful. The next Chapter provides an overall conclusion of the findings, followed by a tailored advice for IDS on how to move towards the SOLL situation.

7 Conclusion

Previous Chapters discussed the different steps from selecting a theoretical sourcing capability model towards a detailed analysis of Stedin's IT department, IDS. Interesting results were found and are concluded in this Chapter.

7.1 Main research conclusion

In this research the main goal was to identify necessary changes to improve IT sourcing maturity in IDS and with that, its chances of sourcing success. By analyzing both the current and ideal situation, the most crucial and beneficial improvement areas were found. It proved that IDS is a very immature sourcing organization and that improvements should be made in several areas.

Nearly all sourcing related activities are performed ad hoc and by teaming between employees. Also, responsibilities between employees are not clear. For example, service managers are performing contract management, account management and process management. The main cause for this problem is the absence of a sourcing governance and more importantly, sourcing processes.

IDS management has expressed the desire to become more active in sourcing, but there is no plan on how to do this. Setting up a sourcing governance, implementing a sourcing process manager role and redefining responsibilities will already provide major improvements in structure and maturity. Not performing these improvements will make sourcing a high-risk activity for IDS.

An analysis was also made of the IT Shared Service Center, which is part of the same holding as Stedin. The unbundling of this SSC will bring many sourcing activities towards IDS in one project. They are two different organizations and comparing their RACIs provided useful insights and suggestions for the unbundling.

Overall, IDS and the SSC cannot be matched in the current situation. First, responsibilities in the SSC are defined differently. SSC contract managers have different responsibilities than the IDS contract manager. Refining responsibilities in IDS is therefore required. Second, the SSC is more mature in architecture and uses it for their sourcing decisions, while IDS is highly developing in this area. Third and most important, the SSC also works almost completely ad hoc. It is not possible to directly integrate them, because they simply do not exist. If one of both organizations defines processes, this will already become much easier.

In the next Section, the conclusion for each individual research question is given; the next Chapter translates these conclusions into a feasible advice, answering the main research question.

7.2 Research questions

The main question to solve the problem statement was, w*hat changes in structure are necessary for IDS Stedin to become more mature in IT sourcing?* Four sub-questions were formulated to find the main answer:

Q1. How can organizations improve IT sourcing maturity?
   a. How is IT sourcing maturity improved according to literature?
   b. What models exist for improving IT sourcing maturity?

Through a literature analysis in the most important scientific journals, a general internet search and conversations with sourcing experts, these questions were answered. It resulted in a long list of sourcing capability models. To select the most suitable model, the following questions were posed:

Q2. What theoretical model is suitable for IDS?
   a. What theoretical criteria exist for the selection?
   b. What practical criteria exist for the selection?
   c. What scope of the model is most useful?

Theoretical and practical criteria were selected and a multi-criteria analysis resulted in the selection of the e-Sourcing Capability Model (e-SCM) (Carnegie Mellon, 2011). Because the e-SCM is an extensive model a scope was applied. This resulted in the final selection of three of the seventeen e-SCM capabilities: Governance Management, Relationship Management and Sourced Services Management. Then, using responsibility matrices (RACI) a gap analysis was made between current and ideal IDS, answering the following questions:

Q3. What changes are required to resolve the differences (Delta)?
   a. What approach should be used for measuring IST and SOLL?
   b. What is the current situation at IDS (IST)?
   c. What is the ideal situation at IDS (SOLL)?
   d. What are the differences between IST and SOLL?

Besides the analysis between IST and SOLL, a comparison was made between IDS and the IT Shared Service Center (SSC). The SSC is part of the same holding as Stedin and governs IT activities that are shared by all the Holding's companies, such as office automation. It is expected that the SSC will be unbundled in the coming years, meaning that IDS will become responsible for many more sourcing activities. For this reason a comparison is made between IDS and the SSC:

Q4. How does the unbundling of the SSC impact IDS?
   a. What is the IST at the SSC?
   b. What differences exist between the SSC and IDS?

The previous Section provided a concise answer to Q3 and Q4; the next Chapter translates these answers to a tailored advice for IDS.

8 IT Sourcing Maturity Advice

The previous Chapter concluded this thesis and summarized the findings from the RACI analyses. In this Chapter, these findings will be transformed into a feasible advice that will allow IDS to move towards a structure and maturity in IT sourcing. This advice answers the main research question and will, in time, solve the main problem statement. This Chapter has two parts; the first advises IDS how to improve their maturity, the second provides suggestions how IDS can better prepare for the SSC unbundling.

8.1 Main advice: from IST to SOLL

Several suggestions for improvement have been made in the previous Chapter, e.g. implementing a sourcing process manager and redefining responsibilities. This advice gives more structure to these suggestions and contains several steps, which are summarized in the continuous improvement model in Figure 11 below.

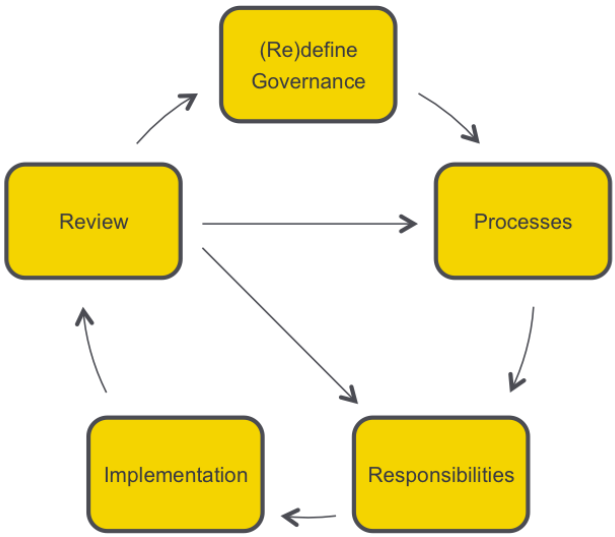


Figure 11 Continuous improvement model sourcing

Although there are other comparable models (e.g. Plan-Do-Check-Act), this model is specified to this advice and sourcing governance of IDS. Below, the advice is formulated in line with the model.

8.1.1 Define the sourcing governance

The first and most important step that IDS is advised to take, is to define the sourcing strategy and governance. The strategy development with Kirkman has already taken over half a year and is still not finished. Before expanding on sourcing, the strategy should be fixed for direction and future choices.

The next step then is to develop the sourcing governance, based on the strategy. The current governance is specified to IT, but does not include sourcing. In order to act on the strategy a clear, useful and supported sourcing governance is crucial. In line with the e-SCM, it should contain the sourcing policy, guidelines, functions, systems and mechanisms. This thesis and the e-SCM provides sufficient aspects and ideas to include.

For this stage, IDS is especially advised to implement the role of sourcing process manager. The defined competency profiles should be used to select the most suitable employee. Ideally, this is a person with good knowledge on processes and ways of working within IDS, with knowledge on defining and carrying out processes and someone that is respected by parties executing the processes.

The sourcing process manager should be closely involved in developing the sourcing governance. The SOLL RACI provides insights in who else to involve in these activities.

8.1.2 Define sourcing processes

This step is foremost the responsibility of the sourcing process manager. Using the governance as a main guideline, processes have to be defined. A good tool is the best practice Gov04 in the SOLL RACI that shows the steps to undertake and who to involve.

The sourcing process manager is advised to start with the following three processes:

- Relationship management; internal, cultural and external (Rel02, Rel03 and Rel05).
- Stakeholder feedback (Mgt09)
- Service value analysis (Mgt10)

These three are selected because they have the most value for *currently* sourced activities. By more actively involving stakeholders and relationships, interpersonal aspects receive more attention as well.

As a final note, architecture within IDS is developing and recently the goal architecture has been set up. It is advised that sourcing is included in architecture as well. A SSC interviewee stressed the usefulness of architecture for sourcing decisions and changes.

8.1.3 Define sourcing responsibilities

After processes have been formalized, the next step is to define responsibilities for the process' activities. In the first step (redefine governance) functions, or roles, were implemented. In this step, the newly defined activities are allocated to a role. One of the main findings in the RACIs was the unclear boundary between contract, account and service manager roles.

The advice for IDS is to especially revise these three roles using the competency profiles. The limited responsibilities of the current contract manager and the too broad range of activities of the service manager create an undesirable situation when sourcing becomes more important. The SOLL RACI and competency profiles help to determine how to allocate employees to the proposed responsibilities. If these are not used, employee and role may not match and the process implementation may not be a success.

An example scenario is to identify two types of
contract managers, i.e. a legal contract manager and an executive contract manager, and a team of service managers. The legal contract manager would govern all legal aspects, which requires less interpersonal skills and more expertise. The executive contract manager is more interpersonally active and manages contract execution. Service managers are responsible for governing individual agreements on service levels. This scenario results in minimal organizational changes, but provides a strict separation of responsibilities.

A final note for this stage is to invest in interpersonal aspects. IDS has a strong focus on agreements, but is minimally active in building relationships, trust, cultural fit and real partnership. By implementing the practices as advised earlier, these areas receive more attention, but they should also be the focus of employees executing the processes to make it a success. Competency profiles will support selecting the right employees.

8.1.4 Implement sourcing processes

After the process has been defined, in line with the governance, and people's responsibilities are clear, the process is implemented. In order to succeed, processes should be carried out in the organization and require support of the parties involved. This requires good change management. Change management has not been the focus of this research and therefore falls outside the scope of this advice.

8.1.5 Review implementation

The final stage in the development model is to review implementation. Figure 11 shows three outward arrows from this stage meaning that, dependent on the outcomes of the review, different steps could be taken. Reviewing plans and implementation is an important aspect of the e-SCM and the model provides sufficient detail for these activities, which the sourcing process manager should perform. The tree consequences of the review are:

- Ideally, the implementation was a success and lessons have been learned. The implementation resulted in an improved maturity of IT sourcing and new steps can be taken in time. The next stage is therefore to refine the sourcing governance. Although it provided a basis, the governance can be improved and be focused on even higher maturity.

- Less ideal is that the defined process is not suitable or requires improvement. The governance remains as-is and together with the parties involved, the sourcing process manager improves the process to make it more suitable.

- Responsibilities may also be non-ideal. This may occur when functions are insufficiently defined or when other roles are more suitable to perform an activity. In this case, the sourcing process manager should revise the activities together with the parties involved to refine responsibilities.

8.1.6 Conclusion

The first cycle of the development model will first result in several new developments, but provides a basis for sourcing maturity. Future cycles may result in the definition of new processes or more mature governance. In time these steps allow IDS to develop towards the SOLL and to become a mature sourcing organization, improving efficiency, cost reduction and innovation. It will also prepare IDS for future sourcing projects and the upcoming developments in their industry.

8.2 The unbundling: what is important

The main advice is described in the previous Section; this Section complements it by describing some focus areas should the unbundling still occur. These focus areas are not crucial for the move towards the SOLL, but may help in making a swift and effective unbundling of the SSC towards IDS.

These focus areas are derived from the RACI comparison and are described below:

- The SSC has more alignment between sourcing and architecture than IDS. When changes occur in the service, the SSC is able to review what the technical consequences are for their other activities. The SSC could advise IDS on how to establish alignment, but also how both architectures are combined for the unbundling. Combining strengths results in faster and higher IT sourcing maturity.

- Mostly the same employees perform the contract, service and account manager roles in the SSC. There are some legal experts and pure service managers for specific contracts. Within IDS these roles are more separated, but responsibilities are unclear. Matching these roles in the unbundling will be a challenge, especially because it is unclear which employees (and roles) are unbundled towards IDS. The most important step IDS can take in this area is to clearly define responsibilities and structures for these three departments, to make the unbundling less complicated.

- Stakeholder feedback is more mature within the SSC. Their approach and way of working provides a good case study for the sourcing process manager in setting up this practice. By cooperating with the SSC, it will be easier for IDS to take over these activities.

- Finally, as already stressed in the conclusions, both organizations work almost completely ad hoc. Merging two organizations that work ad hoc is a huge challenge, because there are no defined processes that can be compared. Because of the unbundling, the SSC is not likely to invest in documenting and optimizing processes and IDS is therefore advised to do this. If one of two organizations is structured, merging them will already be less difficult.

These four focus areas should be addressed by IDS to smoothen the unbundling and IDS is advised to include them into their unbundling plans. Due to the many uncertainties on the unbundling at this point, no further advice can be formulated.

9 Discussion

This Chapter final discusses the approach and results of this thesis and starts with a discussion of contributions, followed by a validation, an overview of limitations and future research areas.

9.1 Contributions

Several important contributions have been made in this research, both practical and theoretical, proving this thesis' relevance.

9.1.1 Practical Relevance

This research resulted in multiple deliverables and practical insights for IDS. First, of the broad theoretical range of improvement possibilities, a selection was made of capabilities that provide most value for IDS. By analyzing the P3 program, interesting insights were gathered for the program. Second, the RACI analyses provide IDS with a clear overview of improvement opportunities as well as an indication of their immaturity in sourcing. Third, the comparison between IDS and the SSC provided insights for the unbundling. Fourth, a set of competency profiles was defined, which can directly be implemented in employee assessments. Final and most important is the advice that has been formulated in this thesis, providing several steps to take towards maturity. Combined these five practical deliverables will help IDS in resolving its main problem statement.

9.1.2 Theoretical Relevance

Besides practical contributions, this research has several theoretical contributions as well. Although the e-SCM is a highly useful and in-depth model, it is also very extensive and does not provide suggestions on where to start implementing it. By combining a scientific empirical research survey on sourcing with the e-SCM, an analysis was made of the most important capabilities in the model. This provides an interesting new view on the e-SCM.

The second theoretical contribution is an overall approach for improving IT sourcing maturity. Where the e-SCM and other models provide the capabilities, there is often no mentioning on how to measure and implement them. This research provides a highly useful and generic approach for improving IT sourcing maturity. Scientists may work on improving this approach, but can also directly apply it in practice.

Combined, the theoretical and practical contributions make this thesis of high relevance.

9.2 Validation

This Section discusses the validity of this research and its results. The e-SCM is not a new model, but the approach used in this research was new and should be validated. The four types of validity prescribed in DSM (Wieringa, 2009) will be used here.

9.2.1 Conclusion Validity

This type validates whether logical reasoning is applied without bias and relates to several parts of the research. First, the e-SCM was carefully selected after the multi-criteria analysis. Second, the model's scope selection was solely based on theoretical analysis and a case study. Third, RACIs were filled using structured interviews. Answers of the interviewees were strictly followed without making additional assumptions. Fourth, the comparisons and advice were solely based on comparing the RACIs and additional comments by the interviewees. Fifth, the competency profiles were set up following the HR approach. Concluding, no bias has been applied.

9.2.2 Construct Validity

This type validates whether constructs are operational and relates to two parts of this research. First, for each interview the definitions used by the e-SCM were applied. For example, the structured interviews with the e-SCM were direct translations of e-SCM activity descriptions. Second, the role definitions are based on their theoretical sources. Finally, there were no statistical analyses performed that required operationalization of variables.

9.2.3 Internal Validity

This type validates the used methodology and approach and validates whether relations between variables and constructs are correct. Overall, the used approach for solving the main problem statement was newly developed. However, the approach followed the Checkland methodology for action research, making its structure internally valid. The individual steps were based on commonly used or tested methods. The e-SCM is an endorsed model, multi-criteria analysis is a commonly used method as are case studies, (semi-) structured interviews and RACI.

For the multi-criteria analysis, practical criteria were based on semi-structured interviews and studying internal documents. In both the focus was on gathering information on the most important practical criteria for IDS. The final criteria are validated because most interviewees mentioned them.

The e-SCM scope selection was, besides a theoretical analysis, based on the P3 limited exploratory case study. Due to its limited nature, no hypotheses were defined as prescribed by Yin (2003). This was chosen because no statistical analysis other than counting was required. Also, its focus was on obtaining a general overview and not a highly detailed and critical evaluation. The case study was based on internal documents and results were validated with a board member of the program, confirming the results.

For the RACI, roles were validated by literature
and activities by the e-SCM. The IDS IST RACI was validated by interviewing multiple employees from related departments. Their answers matched. The SOLL RACI was developed incrementally in five interviews basing the first version on theory. After the third interview, minimal changes were made to the SOLL and it could be considered valid. The SSC IST RACI was based on two structured interviews. The structured approach and preparation validate the approach and its results. See also Appendix G.

The RACI comparison was done by matching each cell between the RACIs. Because the individual values were gathered and validated in structured interviews, the comparison is considered valid as well.

Competency profiles were set up in line with the approach used by Stedin's human resource department, following the HFM approach. To ensure internal validity, the approach by Gartner (Abel, 2005) was included for ranking competencies.

Finally, the continuous improvement model provided in the advice is a first concept. Its steps are validated in the RACI comparison, but the model itself was not validated in this research.

9.2.4 External Validity

This type validates whether results are generic and can be applied in other situations. It should be clear that results are specific to IDS and are overall not applicable in other situations with some exceptions. First, the SOLL RACI was initially set up using theory and was then incrementally optimized for IDS by interviewing department heads. The SOLL RACI is specified to IDS, but will apply to other organizations to a large extent. The main reason is that role definitions and activities are fixed and not specific to IDS.

Second, the competency profiles are based on the SOLL RACI and should therefore also be applicable to any organization. However, due to their size only one profile was added here.

Third, the continuous improvement model provided in the advice is applicable to any organization that desires to improve its governance. It should be further tested but is generic. Besides the individual results, the overall approach of this research is generic and externally valid. It is newly developed, but follows a tested structure and individual steps are validated as well. Any organization can apply this approach to their size and context.

The last validation concerns the core of this thesis, the problem statement. Throughout all discussions and interviews held with employees, the need for structure and guidance was stressed. Achieving more structure is also not just a desire for IT sourcing, but for all activities performed by IDS. There are improvements being made in human resources, IT services and risk management. All these developments confirm the validity of the problem statement.

As a final note, this thesis formulated an advice for solving the main problem statement. It may or may not be followed, but if IDS does not invest in more structured and mature IT sourcing, the risk of failing sourcing projects is very high, especially for larger projects. This was already stressed in Section 1.5. In the IST, IDS is able to set up contracts, negotiate pricing and have meetings with service providers, but good IT sourcing also requires investments in interpersonal aspects such as trust, culture and relationship building.

Implementing the advice will be a challenge, but it will be a rewarding challenge.

9.3 Limitations and further research

This research has contributions for both practice and theory, but also has some limitations that should be taken into account. Other areas require further research and validation. First, evaluations have been made using the e-SCM. The model prescribes several evaluation methods but always requires one or more candidate or authorized lead evaluators. This research was performed in a master's thesis context and was therefore not performed by such a role.

Second, the P3 case study was selected for its size and the potential of improving program plans. However, because of this not all planned documents were finalized and plans had to be executed. The case study was therefore limited in its detail and should not be used as an official e-SCM evaluation.

Third, only two interviews could be held at the SSC. Although preparations were careful and the interview was structured, results are based on a limited number of interviews.

Fourth, the Checkland methodology (Wilson, 1984) prescribes a seventh step, i.e. execution of the changes. For this step only an advice could be formulated. Because of this no validation of the continuous improvement model was done.

There is a vast amount of literature on sourcing capabilities, but nearly no theory on how to implement them. This thesis provides an overview of generic steps and a conceptual model for continuous governance improvement. Both should be further tested in other situations to validate their generalizability in practice. Also, further research should be done on the prioritization of capabilities. Finally, very little literature was found on the e-SCM. It is a highly usable model, but requires more practical application examples through extensive case studies such as this research to make it more attractive for organizations.

References

Abel, C. (2005). Building Business Smarts in IS. 70. Retrieved from

Accenture. (2007). Audiofile: Benefits of using eSCM-SP and eSCM-CL Retrieved March, 10, 2011, from http://www.accenture.com/us-en/Pages/insight-technology-benefits-escm-audio.aspx

Alsudairi, M., & Dwivedi, Y. K. (2010). A multi-disciplinary profile of IS/IT outsourcing research. *Journal of Enterprise Information Management, 23*(2), 215-258.

Baarda, D. B., Goede, M. P. M., de, & Meer-Middelburg, A. G. E., van der. (1996). *Basisboek Open Interviewen*: Stenfert Kroese.

Baarda, D. B., Goede, M. P. M. d., & Teunissen, J. (1995). *Kwalitatief Onderzoek*. Houten: Educatieve Partners Nederland bv.

Beulen, E. (2005). OUTSOURCING DEMAND SUPPLY MANAGEMENT IN IT OUTSOURCING PARTNERSHIPS: GOVERNANCE IN ACTION. 36. Retrieved from

Beulen, E., & Tiwari, V. (2010). *Parallel Transitions in IT Outsourcing: Making It Happen*. Paper presented at the LEcture Notes in Business Information Processing.

Carnegie Mellon. (2010). CMMI Overview Retrieved 1 Nov., 2010, from http://www.sei.cmu.edu/cmmi/

Carnegie Mellon. (2011). e-SCM CL Retrieved 25 Feb, 2011, from http://www.cabrolier.com/indexeng_fichiers/Page844.htm

Casale, F. J. (2007). *Outsourcing 2.0 The new outsourcing and what it means to you*. The Outsourcing Institute.

Chaudhury, A., Nam, K., & Rao, H. R. (1995). Management of Information Systems Outsourcing: A Bidding Perspective. *Journal of management information systems, 12*(2), 131-159.

Cheon, M. J., Grover, V., & Teng, J. T. C. (1995). Theoretical Perspectives on the Outsourcing of Information Systems. *Journal of Information Technology, 10*(4), 209-219.

Clemons, E. K., Reddi, S. P., & Row, M. C. (1993). The impact of information technology on the organization of economic activity: The "move to the middle" hypothesis. *Journal of Management Information Systems 10*(2), 9-35.

CMMI Product Team. (2007). CMMI® for Acquisition. 441. Retrieved from http://www.sei.cmu.edu/reports/07tr017.pdf

Dibbern, J., Goles, T., Hirschheim, R., & Jayatilaka, B. (2004). Information Systems Outsourcing: A Survey and Analysis of the Literature. *The DATA BASE for Advances in Information Systems, 35*(4), 6 - 102.

Earl, J. M. (1996). The Risk of Outsourcing IT. *Sloan Management Review, 37,* 26-32.

Feeny, D. F., & Willcocks, L. P. (1998). Core IS Capabilities for Exploiting Information Technology. *Sloan Management Review, 39,* 9-21.

Gonzalez, R., Gasco, J., & Llopis, J. (2010). Information Systems Outsourcing: An empirical study of success factors. *Human systems management, 29*(3), 139-151.

Han, H. S., Lee, J. N., & Seo, Y. W. (2008). Analyzing the impact of a firm's capability on outsourcing success: A process perspective. *Information & Management, 45*(1), 31-42.

Handley, S. M., & Benton Jr, W. C. (2009). Unlocking the business outsourcing process model. *Journal of Operations Management, 27*(5), 344-361.

Hanna, R., & Daim, T. (2007). *Critical success factors in outsourcing: Case of software industry*, Portland, OR.

HFMtalentindex. (2011). HFM Talentindex | Specialist in online assessment instrumenten Retrieved May, 17, 2011, from http://www.hfmtalentindex.nl/

Hoek, J. (2011). *IS/IT Outsourcing: Involving Architecture in Outsourcing Decision Making*. Universiteit Twente. Enschede.

IT Governance Institute. (2007). CobiT 4.1. 213. Retrieved from http://www.isaca.org/Knowledge-Center/COBIT/Pages/Overview.aspx

ITSqc. (2011). Professional and Organizational Development: The Two Pillars of Outsourcing Success Retrieved March, 9, 2011, from http://www.itsqc.org/about/news/story20110221.html

Ji, C. (2010). *An IT governance implementing model based on IT-business strategy alignmen*.

Ketler, K., & Walstrom, J. (1993). THE OUTSOURCING DECISION. *International Journal of Information Management, 13*(6), 449-459.

Khan, S. U., Niazi, M., & Ahmad, R. (2010). *Critical Success Factors for Offshore Software Development Outsourcing Vendors - An Empirical Study.* Paper presented at the Product-Focused Software Process Improvement.

Lacity, M. C., & Hirschheim, R. A. (1995). *Beyond the information systems outsourcing bandwagon: the insourcing response*. New York: Wiley.

Lacity, M. C., Khan, S., Yan, A., & Willcocks, L. P. (2010). A review of the IT outsourcing empirical literature and future research directions. *Journal of Information Technology, 25*(4), 395-433.

Lacity, M. C., Khan, S. A., & Willcocks, L. P. (2009). A review of the IT outsourcing literature: Insights for practice. *Journal of Strategic Information Systems, 18*(3), 130-146.

Lee, J. N. (2001). The impact of knowledge sharing, organizational capability and partnership quality on IS outsourcing success. *Information & Management, 38*(5), 323-335.

Lee, J. N., Hyunh, M. Q., & Hirschheim, R. (2008). An integrative model of trust on IT outsourcing - Examining a bilateral perspective. *Information Systems Frontiers, 10*(2), 145-163.

Linden, B. v. d. (2010). *IOM2: Innovation within an Outsourcing Relationship.* Master, Radboud University, Nijmegen.

McIvor, R. (2008). What is the right outsourcing strategy for your process. *European Management Journal, 26*, 24-34.

Millar, V. (1994). *Outsourcing Trends.* Paper presented at the Proceedings of the Outsourcing, Cosourcing and Insourcing Conference, Berkely.

Min, L., Rong, D., & Tao-hong, F. (2010). *Factors influencing Information Systems Outsourcing success: A survey in Xi'an, China.* Paper presented at the Management and Service Science (MASS), Wuhan.

Niekerk, A. J. v., & Visser, J. K. (2010). The role of relationship management in the successful outsourcing of maintenance. *South African Journal of Industrial Engineering, 21*(2), 79-90.

Niessink, F., Clerc, V., Tijdink, T., & Vliet, v., Hans. (2005). *The IT Service Capability Maturity Model*.

Paulk, M. C., Weber, C. V., Curtis, B., & Chrissis, M. B. (1995). *The Capability Maturity Model: Guidelines for Improving the Software Process*. Reading, MA: Addison-Wesley Publishing Company.

Princeton. (2011). WordNet Search - 3.0 Retrieved March, 9, 2011, from http://wordnetweb.princeton.edu/perl/webwn

Pundziene, A., Alonderiene, R., & Buoziute, S. (2007). Managers' Change Communication Competence Links with the Success of the Organisational Change. [Article]. *Inzinerine Ekonomika-Engineering Economics*(4), 61-69.

Schwartz, R. B., & Russo, M. C. (2004). How to quickly find articles in the top IS journals. *Communications of the ACM, 47*(2), 98-10198.

Shahzada, B. (2010). *Does IT Architecture Matter?* Paper presented at the Fourth International Conference on Research Challenges in Information Science, France, Nice.

Swar, B., Moon, J., Oh, J., & Rhee, C. (2010). Determinants of relationship quality for IS/IT outsourcing success in public sector. *Information Systems Frontiers*, 1-19.

Wieringa, R. J. (2009). *Design Science Methodology*. Universiteit Twente. Enschede.

Willcocks, L., Feeny, D., & Olson, N. (2006). Implementing core IS capabilities: Feeny-Willcocks IT governance and management framework revisited. *European Management Journal, 24*(1), 28-37.

Willcocks, L. P., & Feeny, D. (2006). IT outsourcing and core is caparilities: Challenges and lessons at Dupont. *Information Systems Management, 23*(1), 49-56.

Willcocks, L. P., & Kern, T. (1998). IT outsourcing as strategic partnering: the case of the UK inland revenue. *Eur. J. Inf. Syst., 7*(1), 29-45. doi: 10.1038/sj.ejis.3000284

Wilson, B. (1984). *Systems: Concepts, Methodologies, and Applications*. Chichester: John Wiley & Sons Ltd.

Yalaho, A., & Nahar, N. (2010). *Key success factors for managing offshore outsourcing of software production using the ICT-supported unified process model: A case experience from Finland, India, Nepal and Russia; .* Paper presented at the Technology Management for Global Economic Growth (PICMET), Phuket.

Yin, R. K. (2003). *Case study research : design and methods*. Thousand Oaks, California: Sage Publications.

Zhang, P., Zeng, Z. X., & Huang, C. P. (2007). *Study on critical success factors for IT outsourcing lifecycle*, Shanghai.

Zineldin, M., & Bredenlöw, T. (2003). Strategic alliance: synergies and challenges. *International Journal of Physical Distribution & Logistics Management, 33*(5), 449-464.

Appendix A – Model Selection Criteria

This Appendix explains the criteria used in Chapter 4. It follows the same order of criteria.

Strategy and Roadmap Support

Capability models are not intended to provide a short-term fix, but should be implemented in organizations for the long term (L. P. Willcocks & Feeny, 2006). Therefore, the model should cohere with long-term plans of Stedin. The approach explained in Section 2.3.2 resulted in four sub-criteria:

1. IDS is aiming to develop more sourcing capabilities in the future. The SCM should allow for capability development and improvement.
2. IDS wants to become more active in sourcing, i.e. sourcing more IT related activities. The SCM should support a wide variety of sourcing arrangements.
3. IDS has defined a goal architecture for 2014, 2016 and 2020. Working under architecture is one of the governing principles for IDS. Architecture should therefore be included in the sourcing capabilities.
4. IDS aims for IT innovations. The SCM should include innovation in its capabilities.

Nine Core IS Capabilities is the only one that does not fulfill criteria number one, it advises on implementation but it is a more abstract model. The other models explain growth and development in capabilities. All models fulfill criteria number two, because each model is focused on sourcing or acquisition in general. Criteria number three is not supported by IS Business Smarts because it is focused on people's competencies and skills; IOM2 is especially focused on innovation and has left out architecture. Finally, criteria number four is only supported by the e-SCM, the CMMI-Acq and the IOM2. For e-SCM it is involved in some of the 95 practices as well as in CMMI-Acq. IOM2 is mainly focused on IT innovation.

Current Projects

Besides long-term plans, a SCM should also cohere with currently running projects. At this point around sixteen IT related projects are either in initiation, planned or running. One of the larger projects, a program even, is P3. In P2 the Marketing Sales System (MVS) is unbundled in both an Eneco and a Stedin part. However, P3 (the follow-up of P2) is aimed at developing and sourcing a new MVS-like system, which is one of the larger IT systems in their IT landscape. The SCM should support the complex aspects of such large projects.

Another relevant project is the IT Services CMM. In 2010, the current maturity level of IT services was measured at around 1.5. The goal for this year is to fully reach level 2 and to keep growing after that. One of the capabilities in the CMM is *sub-contract management*, which is closely related to the relationship and contract management with the sourcing vendor. The SCM should contain this capability and the support of further development as it is already under IDS' attention. Other projects will be discussed where relevant later in this thesis.

Depth and measurability

The main criteria for the long list was that models should consider multiple, practical capabilities. For the final selection a model will be chosen that not only describes sourcing capabilities, but also explicitly defines necessary steps to achieve these capabilities. Also, for future developments, IDS should be able to interpret and use the model without scientific research. The extent to which the capabilities are described and operationalized by the model, depicts the model's relevance

Theoretical Relevance

The model should be theoretically relevant. Some models were found in non-scientific areas and might be developed without validation or a good theoretical basis. In 2010, an extensive literature survey was performed (Lacity, et al., 2010) to find the most relevant independent variables (including capabilities) for the sourcing decision and outcomes. The extent to which the capabilities are covered by the model, depicts the model's relevance.

Focus on IT sourcing

Finally, this study is focused on capabilities for sourcing IT. Only some of the models in the long list are specified to IT sourcing and therefore the final selection is also based on the focus of the model. A model is considered more applicable when specified for IT sourcing.

Appendix B – Capability Descriptions

Each capability is shortly explained below in X (on-going capabilities) and X (life-cycle capabilities). The descriptions are used one-on-one from the model to maintain the most accurate description of the model.

Table 9 Descriptions of on-going capabilities

Sourcing Strategy Management (str)	Determining the sourcing strategy and setting organizational objectives or goals for sourcing
Governance Management (gov)	Establishing organizational structure for sourcing and organizational process management for sourcing processes and procedures. Although the Governance Management capability is specifically focused on issues of sourcing governance, governance is a broad topic and aspects of this topic are covered in multiple capability areas.
Relationship Management (rel)	Establishing and managing long-term relations(hips) with the service providers.
Value Management (val)	Fostering and managing the culture of continuous improvement so that the client derives value from the sourcing engagement, and ensuring ongoing alignment of the sourcing strategy and the organization's sourcing performance with the organization's objectives.
Organizational Change Management (ocm)	Change management process to guide the client's adoption of new systems (organizational and technological) and new ways of achieving business objectives through sourcing. Ensuring readiness for change, and involving relevant sponsors and stakeholders are essential parts of this capability area. Planning for change, managing change activities and communication regarding the changes are integral aspects of this capability area.
People Management (ppl)	Providing and managing skilled resources and the necessary environment for the organization's sourcing activities. They also deal with training that enables sourcing activities to be effectively performed.
Knowledge Management (knw)	Managing information and knowledge systems so that personnel have easy access to the knowledge needed to effectively perform their work.
Technology Management (tch)	Monitoring and managing technology infrastructure. These Practices focus on issues related to integration of the client's technology infrastructure with the service provider's, as well as change management of the technology base.
Threat Management (thr)	Identifying and actively managing threats to the client organization's ability to meet its business and sourcing objectives and requirements. This includes an active focus on risk management, with a particular focus on risks associated with security, privacy, and confidentiality; business continuity, disaster recovery and development of contingency plans; and protection of intellectual property.

Table 10 e-SCM Sourcing Life-Cycle Capability Areas

Sourcing Opportunity Analysis (opa)	Functional analysis of the current operations of the organization and identification of potential functions, processes or services that could be sourced; analysis phase.
Sourcing Approach (app)	Deciding on the type of sourcing for a specific sourcing opportunity. Outcomes from sourcing approach will feed into the planning capability area; analysis phase.
Sourcing Planning (pln)	Planning for implementation of the sourcing approach for a planned sourcing initiative. The procurement methods adopted may vary according to the complexity of the procurement, the size of the expenditure, the requirements, the circumstances, and the market. The outcome from this capability area is the organizational readiness to pursue the proposed sourcing action; initiation phase.
Service Provider Evaluation (spe)	Soliciting potential service providers, screening the set of potential service providers, and selecting the preferred service providers; initiation phase.
Sourcing Agreements (agr)	Carrying out service confirmation, negotiating terms and conditions of the agreements (including SLAs, etc.), and entering into an agreement with the selected service providers. Also involves dealing with renegotiation and making changes to agreements; initiation phase.
Service Transfer (tfr)	Successfully transferring resources between the client organization and its service providers by creating and implementing a transfer plan; creating client/service provider teams; identifying key skill sets/personnel to retain in-house or transfer to the service providers; ensuring service design meets the client's needs; and transferring resources, personnel, and knowledge to service providers; initiation phase.
Sourced Services Management (mgt)	Having the capability to manage service providers, and the issues and challenges that arise after the agreement has been reached. Deals with managing performance expectations of the services defined and delivered by the service provider in their agreement; delivery phase.
Sourcing Completion (cmp)	Planning and making provisions for the closure of the relationship/project and ensuring that the hand off is smooth; completion phase.

Appendix C – Capability Selection Method

This Appendix expands on Section 5.1 and explains how the survey by Lacity et al. (2010) was used to select the most relevant capabilities from the e-SCM.

For the capability selection, only those variables (mentioned in the survey of Lacity et al.) were used that have been studied at least five times and had significant results (either positive or negative). For example, *Relationship Variability* has been studied only four times and is not included; *Cost Reduction* has been studied forty times and was found to have a significant impact on the sourcing decision, and is therefore included. Service provider capabilities are also left out because IDS is not the service provider. Although there are many more independent variables, only these are empirically proven relevant for sourcing. Table 11 lists the variables, selected from the survey by Lacity et al, and how they map to the e-SCM capabilities.

In total 35 independent variables were sufficiently researched, significant, and not unique to the service provider. The literature survey shortly described each of them. When there was a match between the e-SCM practice and the variable description, the corresponding capability was considered to cover the variable.

Table 3 (in Chapter 5) shows that most capabilities cover ten to twenty independent variables. However, these variables have different impacts. In the survey they were classified from significantly negative (--) to significantly positive (++) on a five-scale range (--, -, MM, +, ++) with (MM) meaning that "the variable matters" (Lacity, et al., 2010) (see also Table 11). Optimizing a (++) variable has more potential in providing a positive impact on the sourcing outcome than a (+) or an (MM). Therefore the variables have been weighed to find which capabilities show the highest potential. MM is factor 1 (has no influence, but matters); (+) and (++) weigh factor 1.5 and 2 respectively. (-) and (--) weigh factor 1.5 and 2 respectively as well, because mitigating a negative influence by implementing a capability provides an advantage as well.

Using this method, each capability was weighed and its outcomes are further discussed in Chapter 5.

Table 11 Significant independent variables

Independent Variable	Weight[8]	Category	Involved in Capabilities
Cost Reduction	++	Motivation to Outsource	Str, val, opa, app
Focus on Core Capabilities	++	Motivation to Outsource	Str, gov, opa
Access to Expertise/Skills	++	Motivation to Outsource	Str, ppl, knw, thr, opa, app, spe
Business/Process Performance Improvements	++	Motivation to Outsource	Str, opa, app
Technical Reasons	++	Motivation to Outsource	Knw, tch, thr, opa, app
Political Reasons	+	Motivation to Outsource	Str, ocm, opa
Concern for Security/ Intellectual Property	-	Motivation to Outsource	Tch, thr
Fear of Losing Control	--	Motivation to Outsource	Ocm
Uncertainty[9]	-/--	Transaction Attributes	Gov, rel, tch, thr, ocm, spe, agr, mgt
Measurement Difficulty	--	Transaction Attributes	Rel, val, knw, tch, opa, spe, agr, mgt
Transaction Costs	--	Transaction Attributes	Rel, val, tch, opa, spe, agr, mgt
Critical Role of IS – Transaction	-	Transaction Attributes	Str, gov, thr, opa
Business Risk	-	Transaction Attributes	Str, gov, rel, ocm, knw, thr, opa, agr, mgt
Effective Knowledge Sharing	++	Relationship Characteristics	Gov, rel, val, ocm, ppl, knw, spe, agr, mgt
Cultural Distance	--	Relationship Characteristics	Rel, ocm, thr, spe, mgt
Trust	++	Relationship Characteristics	Rel, ocm, spe, agr, mgt

[8] On a scale of (--, -, MM, +, ++)
[9] Appears both for outsourcing decision (-) and outcome (--); weight is averaged at 1.75.

Prior Client/Supplier Working Relationship	++	Relationship Characteristics	Rel, val, opa, spe, mgt
Communication	++	Relationship Characteristics	Rel, val, mgt
Relationship Quality	++	Relationship Characteristics	Rel, agr, mgt
Partnership View	++	Relationship Characteristics	Rel, val
Prior IS Department Performance	-	Client Firm Characteristics	Gov, tch, thr, opa
Client Experience with Outsourcing	++	Client Firm Characteristics	All
Supplier Management Capability	++	Client Firm Capabilities	Rel, val,
IS Technical and Methodological Capability – Client	++	Client Firm Capabilities	Tch, spe, agr, tfr, mgt
Risk Management Capability – Client	+	Client Firm Capabilities	Thr, agr, mgt
Contract Negotiation Capability	++	Client Firm Capabilities	Rel, spe, agr
Cultural Distance Management	+	Client Firm Capabilities	Rel, ocm, spe, agr
Outsourcing Decision – Make-or-buy	+	IT Outsourcing Decision	Str, gov, opa, app
Contract Detail	++	Contractual Governance	Gov, rel, spe, agr
Contract Type	MM	Contractual Governance	Gov, app
Contract Mechanisms	MM	Contractual Governance	Gov, app, agr
Contract Size	++	Contractual Governance	Gov, app, agr
Evaluation Process	MM	Decision Characteristics	Rel, spe
Top Management Commitment/Support	++	Decision Characteristics	Str
Influences – Mimetic	++	Influence Sources	All

Appendix D - Exploratory Case Study Approach

This Appendix expands on Section 5.4 by describing the case study approach for the P3 program.

Measurement Approach

The e-SCM distinguishes between several evaluation methods, i.e. self-appraisal, evaluation and evaluation for certification. The latter is performed by the ITSqc itself (developer of e-SCM), the other two may be performed by third parties and have a *mini* and *full* variant. In each, the evaluator must be a candidate or authorized lead evaluator. Here, a mini self-appraisal is performed[10]. The general purpose of this method is "to launch or check progress in an improvement effort" (Carnegie Mellon, 2011) using a subset of all the available capabilities.

As mentioned in Section 5.3, in total six capabilities will be measured. These are Relationship Management, Governance Management, People Management, Threat Management, Sourcing Agreements and Sourced Services Management. Each of these six consist of a number of practices that, when implemented, determine whether the capability is present. It was chosen to only focus on level two practices because level two focuses on a single project (P3), whereas higher levels focus on the organization as a whole.

Measurement is done based on internal documents. The used documents are the selection guidelines (selectieleidraad), request for proposal main document (RFP hoofddocument) and the program plan (programmaplan). Selection guidelines describe how the service provider is selected for P3. The RFP describes the formal request for service providers to propose their solution and contains a company description and an outline of the requested service, roadmap, governance, contract and financial aspects. The program plan is an internal document and describes the teams that govern the entire program, the planning, risks, business case and responsibilities. The RFP is at this point still under development, but its main structure and contents are already documented.

To measure whether the level two capabilities are implemented, a measurement instrument was created. A checklist was set up per practice, per activity, to calculate the implementation percentage. The checklist contains a total number of 190 activities, i.e. an average of seven activities per practice. The entire checklist is added in Table 12.

The documents were searched for notifications of each activity. When found, the activity was checked present (1) and the location of the activity in the document written down. When an activity was not found, it was checked absent (0). This resulted in an implementation percentage per practice and an overall implementation percentage per level two capability. Measurement results were validated with a member of the program board in a one-hour discussion.

[10] Note that the appraisal is not performed by a candidate or authorized evaluator and that it is performed in the context of a master's thesis.

Note that conclusions are only drawn for P3. If a practice is not implemented in P3 it should not be concluded that it is never implemented in IDS.

Results are described in Section 5.4. Following is a short description of the capabilities and practices involved in the case study.

Capabilities

Here, the six measured capabilities are shortly discussed. For a list of all the practices the reader is forwarded to the e-SCM; the name of each practice is given in

Table 5, in Section 5.4.

Governance Management
Governance is defined as "the structures, processes and relational mechanisms for the IT decision making in an organization" (Ji, 2010). The e-SCM focuses on "establishing organizational structure for sourcing and organizational process management for sourcing processes and procedures" (Carnegie Mellon, 2011).

Relationship Management
This capability focuses on establishing and managing and developing long-term relations with the service providers. Good partnership and trust in the relation had the attention of many recent studies (Han, et al., 2008; Lee, 2001; Lee, et al., 2008; Swar, et al., 2010). This focus has already been called 'outsourcing 2.0', depicting the change from cost-oriented relationships towards long-term partnerships (Casale, 2007).

People Management
Although this capability has low priority according to the ranking provided in Section 5.3, the importance of involving of people and their competencies and skills is recognized in literature. The IS Business Smarts model by Gartner (explained in Section **Error! Reference source not found.**) focuses entirely on the skills and competencies of IT employees. The Nine Core IS Capabilities model (also explained in Section **Error! Reference source not found.**) is focused on core capabilities but these can be seen as a set of roles and competencies that the organization should retain and develop in-house.

Threat Management
Threat Management is not highest on the ranking, but also receives much attention in organizations. The e-SCM describes this capability as "identifying and actively managing threats to the client organization's ability to meet its business and sourcing objectives and requirements". Distinctions can be made in e.g. business risk, project risk, legal risk, and political risk (Clemons, et al., 1993; Earl, 1996; Hanna & Daim, 2007). The fact that over seventy percent of projects do not achieve its intended results is a risk itself (Zineldin & Bredenlöw, 2003). Managing risk and knowing what potential threats are, is of high importance for .

Sourcing Agreements

Being second on the theoretical ranking (Section 5.3), sourcing agreements should have a significant impact on sourcing outcomes when effectively performed. It is described in the e-SCM as "carrying out service confirmation, negotiating terms and conditions of the agreement (including SLAs, etc.), and entering into an agreement with the selected service provider". Negotiation and SLAs are important aspects of the initial phases of the contract (Zhang, Zeng, & Huang, 2007). Also, a SLA is considered as a help for building trust and better communication (Linden, 2010).

Sourced Services Management

Finally, Sourced Service Management is described in the e-SCM as "having the capability to manage service providers, and the issues and challenges that arise after the agreement has been reached". It has close relation to relationship management, but this capability is more focused on the formal aspects of the contract and measuring its outcomes than on the relationship with the provider. The focus on managing the provider also depicts the need for interpersonal competencies. People Management is therefore of high importance for this capability.

Table 12 The P3 Measurement Instrument

Practice	1	2	3	4	5	6	7	8	9	10	11	12	Total
Gov02	1	0	1	1	0	1	1	0	1	1	1	1	75%
Gov03	1	1	1	0	0	0	0	0	0				33%
GovTotal													**54%**
Rel01	1	1	1	0	1	1	1	0	0	1	0		64%
Rel04	1	1	1	1	0								80%
RelTotal													**72%**
Ppl01	1	0	0	0	0	0	0						14%
Ppl02	0	0	0	0	0	0							0%
PplTotal													**7%**
Thr01	1	1	1	1	1	1	0	0	0				67%
Thr03	1	0	0	0	0	0	0	0	0				11%
Thr04	0	0	0	0	0	0	0	0	0	0	0	0	0%
Thr05	1	1	1	1	0	0	0						57%
Thr06	1	0	0	0	0	0	0	0					13%
ThrTotal													**29%**
Agr02	0	0	1	0	0	0							17%
Agr03	0	0	0	0	0	0	0						0%
Agr04	1	0	0										33%
Agr05	1	1	1	1	1	1	1						100%
Agr06	1	1	1	1	1	0							83%
Agr07	0	0	1	0	0	0							17%
AgrTotal													**42%**
Mgt01	1	1	1	1	0	1	1	0	1	0			70%
Mgt02	1	1	1	1	0								80%
Mgt03	1	1	1	1	1	0	0	0	1				67%
Mgt04	1	0	0	1									50%
Mgt05	1	0	1	1	1	1	0						71%
Mgt06	1	1	1	1									100%
Mgt07	1	1	1	1	1	0	1						86%
Mgt08	1	1	1	1	1	0							83%
Mgt11	0	1	1	0	0	1	0	0					38%
MgtTotal													**72%**

Appendix E - Selected Capabilities and Practices

This Appendix expands on Section 6.1 and shortly describes each of the practices per selected capability.

Governance Management
Governance Management includes the following level three practices:

1. Sourcing Policy. This practice aims at defining structures, processes and mechanisms to improve, manage and assess sourcing initiatives and support the sourcing strategy.

2. Defined Sourcing Processes. Aims at developing and following documented sourcing processes that improve performance, guide sourcing personnel and provide a basis for cumulative and long-term benefits for the organization.

3. Align Strategy & Architectures. Architecture should supports sourcing across the organization. The e-SCM describes this as the "base for sustaining IT-enabled services".

4. Business Process Integration. Focused on the integration of business processes between the client and the service provider. An example is the integration of in-house and external service desk processes.

5. Adapt to Business Change. This means to align the sourced services with the changing demands and environment of the business. When it changes, changes may also be required for the sourced services and the contract with the service provider.

Relationship Management
Relationship Management includes the following level three practices:

1. Service Provider Relationships. Aimed at long-term relationships and good communication between client and service provider. A good relationship helps both parties to better adapt to changes in their environment and needs. At level two the focus is especially on the interactions with the service provider, at level three the focus is on creating understanding of each other's business objectives and long-term goals.

2. Internal Relationships. The importance of the internal client is stressed. Whereas the previous practice aimed at good relationships with external parties, this practice is aimed at internal parties. Better understanding their needs helps to better fulfill them.

3. Cultural Fit. Culture has many attributes. Examples are language, working hours and decision-making style. Two organizations nearly always have different cultures in one or more areas and the goal should not be to perfectly match them. Organizations should rather accept the differences and find a way to effectively work together.

Sourced Services Management

Sourced Services Management includes the following level three practices:

1. Stakeholder Feedback. One way of improving relationships is to better understand the needs and desires of your stakeholders. This practice aims to collect and analyze data from stakeholders and to take action to better meet their needs. Stakeholders can be both internal and external parties and this practice is closely related to the Relationship Management practices.

2. Service Value Analysis. This practice stresses the importance of checking whether the proposed added value in the sourcing business case is actually achieved by setting up measures and measuring value. Measures should be clearly defined to identify the real value.

Appendix F - Roles and Departments

Table 13 below shows the current departments within Stedin that are relevant for this research on the left. On the right, the corresponding role in the RACI is stated. Note that this is the IST situation.

Table 13 Stedin Departments / Functions mapped to the RACI Roles

Stedin Department / Function	RACI Role
CEO	CEO
CIO	CIO / IT Director
Senior IT Advisor	CIO / IT Director
Head A&P	CIO / IT Director
Head PPM	CIO / IT Director
Head ICT Exploitation	CIO / IT Director
Head Competence Centre	CIO / IT Director
Architecture & Information Security	IT Architect
Business Process & Information Analyst	IT Architect
Project Manager	Project Manager
Portfolio Manager	Portfolio Manager
Design, Build & Test	IT Professionals
Management	IT Professionals
Service Desk	IT Professionals
Process & Service Level Management	Service Manager and Account Manager
Contract Management	Contract Manager
SAP	IT Professionals
BI	IT Professionals
Integration Solutions	IT Professionals
Information Management	Information Manager
Service Provider	Service Provider
Purchasing	Purchasing

Appendix G – IDS IST RACI Approach and Validation

This Appendix expands on Chapter 6 and discusses the IDS IST RACI. It starts with the approach, followed by the high level RACI, a discussion of its results and validation.

Approach

In order to fill the RACI for the current situation, interviews were held with several IDS employees, in different departments. The interviews were held face-to-face and were structured. In the interviews each activity of the RACI was discussed and the interviewee answered two questions; 1) is the activity currently performed by you or your direct colleagues and 2) who has responsibility for the execution and the end result? Question 1 was asked to ensure that answers were not based on assumptions about other departments. Question 2 was used to determine the R and A; C and I are not part of the IST measurement as explained in the research approach.

Interviews were held with the contract manager, a service level manager, team leader portfolio management, team leader service management (responsible for the service desk, operational management and service level management), an information manager and the head of architecture and processes.

The high level RACI

Through several structured interviews, the IDS IST RACI was developed, which is depicted in Table 14 below. It shows the current responsibilities within IDS on a high level.

Note that when a responsibility on a practice level is visible it means that at least one of the subsequent activities is performed. The detailed overview is provided in Chapter 6.

The following remarks are made based solely on this RACI:

- There are two practices for which no single activity is performed, i.e. Gov04 and Rel05. Sourcing processes were based on teaming and on individual situations; there were no documented processes. A cultural fit was sometimes pursued unknowingly, but never explicitly.
- The sourcing process manager role does not exist within Stedin. When work instructions or ad hoc processes were defined, this was done by the service manager role.
- There are several practices where the A and R are fulfilled by the same role. This is not ideal because it means a role is supervising his/her own work.
- Service Providers and Purchasers exist, but have no responsibilities in this RACI. The Information Manager is only found accountable for Gov06 because the business is the process owner.

- The activity level is not visible here, but for some practices only a few activities are performed. These are Gov05 (1 of 6 performed), Rel02 (2 of 6 performed), Mgt09 (3 of 6 performed) and Mgt10 (1 of 7 performed). This will become visible in Section 6.2.

Concluding, there are many holes in the RACI and when responsibilities are clear, the individual activities are often performed ad hoc. Quality of performed activities is not specified.

Validity

Each interview resulted in a RACI, which were afterwards combined. The end result is valid because of two reasons: 1) each interviewee responded on his own responsibilities or those of his direct colleagues. Some interviewees were direct colleagues of each other and in their answers no contradictions were expressed. 2) Interviewees were critical to their own work and recognized that improvements were necessary and that situations were far from ideal. There was no reason to assume employees were dishonest or incomplete in their answers.

Table 14 High level IDS IST RACI

Activity	Description	CEO	CIO / IT Director	IT Architect	Sourcing Process Manager	Project Manager[11]	Portfolio Manager	Contract Manager	Service Manager	Account Manager	IT Professionals	Information Manager	Service Provider	Purchaser
Gov	**Governance Management**	**A**	**R**	**R**								**R**		
Gov01	Sourcing Policy		A/R						R					
Gov04	Sourcing According to Process													
Gov05	Strategy & Architecture Alignment			A/R										
Gov06	Business Process Integration					R			R			A		
Gov07	Adapt to Business Change		A			R	R	R	R					
Rel	**Relationship Management**	**A**	**R**											
Rel02	Service Provider Relationships		A			R		R	R		R			
Rel03	Internal Relationships		A			R				R				
Rel05	Cultural Fit													
Mgt	**Sourced Services Management**	**A**	**R**											
Mgt09	Stakeholder Feedback		A/R					R	R	R	R			
Mgt10	Service Value Analysis		A			R		R	R					

[11] A project manager is only involved during an official project. When this is not the case, he is not involved.

Appendix H - IDS SOLL RACI Approach and Validation

This Appendix expands on Chapter 6 and discusses the IDS SOLL RACI; the ideal and future situation of IDS. It starts with the approach, followed by the high level RACI, a discussion of its results and validation.

Approach

The RACI was identified in two steps. First, a desk research was performed. The Stedin intranet provides descriptions of each function's- and department's responsibilities. Using these documents and roles and tips from the e-SCM, the RACI was filled. This first version required more than just a theoretical basis and was therefore discussed with IDS employees to include their vision and ideas.

Structured interviews were held with an information manager and all heads of IDS departments (four in total). In these face-to-face interviews, each of the activities in the RACI was discussed. Then, for each activity the interviewee was asked to indicate who should ideally be responsible and accountable. When they considered themselves or their department responsible or accountable, the consulted and informed roles were discussed as well. A more semi-structured interview was held with the CIO who requested the RACI up front. Due to time constraints he mainly provided his comments and ideas.

The high level RACI

The SOLL RACI was first developed on a theoretical basis by analyzing internal function documents and role descriptions in literature. Then, it was completed incrementally by holding structured interviews with Stedin employees (see Table 15). Note that because this concerns the ideal situation, the consulted and informed roles are also included.

The CEO is considered accountable (A) for each practice and delegates execution responsibility (R) at the CIO / IT Director. The CIO / IT Director then delegates the individual practices towards the other roles and only remains A.

To be *informed* (I) for the entire capability means that the role is only consulted (C) or I for a subsequent practice and is not R. To be *consulted* for the entire capability means that the role is R for at least one of the subsequent practices. *Responsible* here means that the role is accountable (A) for at least one of the subsequent practices.

The following remarks are made based solely on this RACI:

- The CIO / IT Director is accountable for all but one practices. Only for Gov06 the Information Manager is accountable. This was decided because it often concerns a business process and not an IT process, making the business accountable.

- For Gov07, the CIO / IT Director was found accountable. In the interviews, it was stressed that the business did not care about sourcing, except that everything should work and cost as planned. Possible changes to sourced activities are therefore not the responsibility of the business.

- The purchaser and architect have a limited role. The purchaser is especially active in selecting and evaluating service providers during selection. He/she mostly performs financial activities. Such activities are not part of the selected capabilities. The IT architect has a supporting role and is less involved with actual sourcing, i.e. relation management and contract management.

Validity

Each interview resulted in a completed RACI. After the interview, the main RACI was updated with the outcomes of the interview. In this way, the RACI developed incrementally. Interestingly, the final two interviews resulted in minimal changes. The SOLL RACI is therefore considered valid, complete and supported by IDS management.

Table 15 High level IDS SOLL RACI

Activity	Description	CEO	CIO / IT Director	IT Architect	Sourcing Process Manager	Project Manager	Portfolio Manager	Contract Manager	Service Manager	Account Manager	IT Professionals	Information Manager	Service Provider	Purchaser
Gov	**Governance Management**	**A**	**R**	**C**	**C**	**C**	**C**	**C**	**I**	**I**	**I**	**R**	**I**	**I**
Gov01	Sourcing Policy		A/R	C	R	C	C	C	C	C	C	C		C
Gov04	Sourcing According to Process		A		R	I	I	R	C		C	C	I	
Gov05	Strategy & Architecture Alignment		A	R				R			C	C	C	
Gov06	Business Process Integration			C	C	R		R	C	C	C	A	C	
Gov07	Adapt to Business Change		A		R	I	R	R	C	C	C	C	C	
Rel	**Relationship Management**	**A**	**R**		**C**	**C**	**I**	**C**	**C**	**C**	**C**	**C**	**C**	**C**
Rel02	Service Provider Relationships[12]		A		R	R	C	R	R		R	C	R	R
Rel03	Internal Relationships		A		R	R	C	R		R	C	R		
Rel05	Cultural Fit		A			R		R	C	C	C	C	C	C
Mgt	**Sourced Services Management**	**A**	**R**		**I**	**C**	**C**	**C**	**C**	**I**	**C**	**C**	**C**	
Mgt09	Stakeholder Feedback		A		C	R		R	C	C		C	C	
Mgt10	Service Value Analysis		A			R	R	R	R	I	R	R	R	

[12] For Rel02, -03, -05 and Mgt09, -10. Responsibility is placed on the Head Project or Portfolio Manager when it concerns a project, otherwise responsibilities is placed on the Head Contract Manager.

Appendix I – SSC IST RACI Approach and Validation

This Appendix expands on Chapter 6 and discusses the SSC SOLL RACI. It starts with the approach, followed by the high level RACI, a discussion of its results and validation.

SSC IST approach

Because the main problem statement and research itself are focused on IDS, and because the SSC was not explicitly studied yet, the exploratory case study approach was selected (Yin, 2003). This type of research is intended to analyze a situation without a predefined theory and analyzing the data to find results.

The main goal of the case study is to analyze which RACI activities are performed, and which roles have the responsibility for them. Comparing the SSC RACI to the IDS IST RACI shows how their roles, activities and responsibilities match for the unbundling. In line with the IDS IST, only the R and A will be identified.

The RACI is filled using structured interviews. Initially, the SSC director was contacted for an introductory conversation. He explained the SSC's basic activities and provided SSC documentation and three contacts with whom an interview could take place. In total two two-hour interviews were held. The first was held with two contract managers of the SSC, the second with the customer services manager. Questions were structured according to RACI and both interviews had the following order:

1. Explain the research, goal of the interview and a definition of sourcing;
2. Introduction of the interviewee;
3. The actual interview;
4. Possible final discussion.

After the interviews, the answers were combined into the RACI. The interview (translated from Dutch) is added in Appendix J.

High level RACI

In the interviews, the SSC IST RACI was developed. Table 16 below shows the resulting RACI on a high level. There were some differences in perspective between the two interviews. The main reason was that the first interview concerned more tactical / operational employees and the second interview a tactical / strategic employee. The differences however were minimal and mainly concerned their own involvement in certain activities. The following remarks are made based solely on this RACI:

- Three practices are not performed: Gov01, Gov04 and Rel05. A sourcing policy and process is not documented and cultural fit receives no specific attention.
- Only for Rel03 and Mgt09 all activities are performed. However, the activities are not performed according to documented processes.
- For Gov07, both the CIO and the Information Manager (business) are A; the SSC is A for a plan to recognize potential changes, the Information Manager is A and R for actually recognizing them.

- Many activities are also performed on a management level, especially for relations and sourced services management. The main reason is that the Information Manager is often the strategic level representative of the business, for example the CIO of IDS.
- The contract, service and account manager role are generally performed by the same employees. Responsibilities are filled in, based on the role they perform for that activity.
- Mgt09 only exists of customer satisfaction surveys, performed by service management. The CIO / IT Director performs some stakeholder management and is in the process of formalizing it. For example he wants to analyze the differences in customer satisfaction on tactical and operational levels.
- Mgt10 is mostly performed by the CIO / IT Director who "some times" looks back at the case study, analyses the results and starts improvement projects. This is not a formalized process.

Validity

There was no possibility for further validation. However, the structured interviews were comparable to the interviews for the IDS IST, which were validated. The results of this case study were therefore considered valid as well.

Table 16 High level SSC IST RACI

Activity	Description	CEO	CIO / IT Director	IT Architect	Sourcing Process Manager	Project Manager	Portfolio Manager	Contract Manager	Service Manager	Account Manager	IT Professionals	Information Manager	Service Provider	Purchaser
Gov	**Governance Management**	**A**	**R**									**R**		
Gov01	Sourcing Policy													
Gov04	Sourcing According to Process													
Gov05	Strategy & Architecture Alignment		A	R					R		R			
Gov06	Business Process Integration		A			R								
Gov07	Adapt to Business Change		A			R		R	R			A/R		
Rel	**Relationship Management**	**A**	**R**											
Rel02	Service Provider Relationships		A			R		R	R		R			
Rel03	Internal Relationships		A							R	R			
Rel05	Cultural Fit													
Mgt	**Sourced Services Management**	**A**	**R**											
Mgt09	Stakeholder Feedback		A/R						R		R			
Mgt10	Service Value Analysis		A/R						R		R			

Appendix J – SSC Case Study Interview

Below, the questions are listed that were posed during the SSC interviews.

Questions:

1. What is your function in the SSC and which activities do you perform?
2. To what extent are the following roles present within the SSC:
    a. IT Architect
    b. Sourcing Process Manager
    c. Project Manager
    d. Portfolio Manager
    e. Contract Manager
    f. Service Manager
    g. Account Manager
    h. IT Professionals
    i. Information Manager
    j. Purchaser
3. Within the SSC, is there a documented sourcing policy? If so,
    a. Does it contain guidelines for the general sourcing process?
    b. Does it contain functions that should be fulfilled?
    c. Does it contain guidelines for (setting up) service level management?
    d. By which persons/functions is this documented and implemented?
4. Is sourcing performed according to a defined process?
    a. Are sourcing processes and assets (documentation, software, training) defined?
    b. Are there performance indicators for the sourcing process?
    c. Is there a storage place for measurement data?
    d. Is the process implemented according to a plan?
    e. Are potential adjustments reviewed?
    f. Are processes verified for correctness?
    g. Are results gathered?
    h. Are results compared to the defined process and requirements?
    i. Are potential anomalies documented and communicated?
    j. Is the status of the above traced?
    k. Who is/are responsible for these activities?
5. Is there alignment between strategy and architecture?
    a. Does architecture align with the business strategy?
    b. Does architecture align with the IT strategy?
    c. Is there a technical architecture that supporting sourcing?
    d. Does architecture align with sourced activities?
    e. Do sourced activities and internal business processes align and are they consistent?
    f. Do sourced activities fulfill the IT policy and standards?
    g. Who is/are responsible for these activities?
6. Are business processes integrated with those of the service provider?
    a. Are contact persons identified?
    b. Are relevant processes identified and analyzed?
    c. Are performance indicators set up for process integration?
    d. Is a plan set up for process integration?
    e. Is it measured whether integration is successful according to plan?
    f. Who is/are responsible for these activities?
7. Are adaptations made for changes in business processes?
    a. Does an approach exist for identifying and reviewing these changes?
    b. Are potential process or services changes identified?
    c. Are relevant stakeholders involved for reviewing and agreement?
    d. Are service modification requests set up?
    e. Is alignment with strategy, policy, goals and processes safeguarded?
    f. Who is/are responsible for these activities?
8. How are service provider relationships handled?

   a. Is there a service provider management approach?
   b. Are the most important contact persons identified?
   c. Are relationships with service providers built?
   d. Is frequent communication provided?
   e. Are the relationship and agreement watched over and are interventions made when necessary?
   f. Who is/are responsible for these activities?
9. How are internal relationships handled?
   a. Are the necessary functions and roles know for relationship management en delivery of services?
   b. Are the required contact persons and responsibilities for selected functions and roles known?
   c. Are relationships with the internal customer built?
   d. Is frequent communication provided?
   e. Is the relationship watched over and are interventions made when necessary?
   f. Who is/are responsible for these activities?
10. Are cultural differences handled?
   a. Are potential interactions between service provider, stakeholders, third parties and customers identified?
   b. Are cultural aspects identified that influence results?
   c. Are potential differences identified?
   d. Is analyzed what the impact and consequences are of the differences?
   e. Are required steps for a cultural fit identified?
   f. Is a plan set up for the cultural fit and presented to relevant stakeholders?
   g. Are results of the plan traced?
   h. Who is/are responsible for these activities?
11. Is stakeholder feedback used?
   a. Are relevant kinds of stakeholder information identified?
   b. Is identified what aspects require feedback?
   c. Are sources for the feedback identified?
   d. Is stakeholder information collected, analyzed and maintained?
   e. Are results used?
   f. Who is/are responsible for these activities?
12. Is the value of sourced IT activities analyzed?
   a. Is the business case reviewed and maintained that describes the service provider support?
   b. Are business case aspects for improvement or research identified?
   c. Is there an approach for comparing the business case with performance?
   d. Are these comparisons performed?
   e. Are results of the comparison documented?
   f. Are negative differences identified?
   g. Are improvement projects set up?
   h. Who is/are responsible for these activities?

Appendix K – Competencies

This Appendix shows the long- and short-list of competencies selected per role. The long list consists of all values shown; the short-list is represented by values in **bold**.

Table 17 HFM Talent Index competencies per role[13]

	CIO/IT Director	IT Architect	Sourcing Process Manager	Project Manager	Portfolio Manager	Contract Manager	Service Manager	Account Manager	IT Professionals	Information Manager	Purchaser
Operational											
Accurateness		**A**				**A**	**A**		**A**		**A**
Decisiveness	**E**		**A**	**A**	**A**	**A**					
Delegating	A										
Quality Orientation		**A**		A			**A**		**E**		
Negotiating						A					**E**
Planning			**A**	**E**	I						
Sense of Duty						**A**	A		A		
Presenting											
Achieving under pressure									E		
Result Orientation				**E**	I	**A**	**E**		**A**	I	**E**
Structuring		**E**	**A**		**A**						
Leading	**E**			**A**							
Interpersonal											
Ability to Adjust							I		I	**A**	A
Social Skills				**E**		**A**	**A**	**A**		**A**	**A**
Creating Support	**E**		**A**					I		**A**	
Giving Feedback	E			A							
Customer Orientation		**A**						**E**			I
Listening Ability		A						**A**		**A**	
Motivating	**E**			A							
Researching Motives					I			A		**E**	A
Organization Sensitivity	**E**		I	A	**A**			**A**		**E**	
Convincing					**A**		**A**	**A**		A	**A**
Cooperating			I			**E**	**A**		I	**A**	A
Teambuilding				**E**		A					

(continues on next page)

[13] E = Expert, A = Advanced and I = Initial. Black markings were included in the final selection, grey markings were filtered out.

Personal											
Assertiveness	E						I				
Commercial Drive					A					A	**E**
Supporting		A	A								
Drive	**E**			A					**A**		
Dynamics											
Flexibility								A	**A**	A	
Initiative										**E**	
Integrity						**A**	A	**A**			**A**
Entrepreneurship											
Sensitivity				A		**A**					
Stress Resistance	**E**						**A**	**A**	**A**		
Willingness to Change		A	**A**		**E**	A		**A**	**E**		
Self Development											
Conceptual											
Analyzing and judging		**E**	**A**		**A**		**A**				
Creativity		A	A						I		
Helicopter View	E	**E**	**A**		**A**						
Innovating											
Market Orientation		**A**									**E**
Situational Awareness					**A**	A		I			
Strategic Insight	**E**	**A**	**A**								

Appendix L – Example Competency Profile

Service Manager Competencies

1. **Accuracy**
   Effective use of and consequent attention for detailed information.
2. **Quality Orientation**
   Setting high quality demands for products and services and acting on them.
3. **Result Orientation**
   Being focused on the realisation of goals and results.
4. **Social Skills**
   Effectively making contact with others.
5. **Convincing**
   Using arguments and expressiveness in presenting opinions and ideas to retrieve consent.
6. **Cooperating**
   Together with others, provide an effective contribution to a common goal.
7. **Stress Resistance**
   Being able to handle tension.
8. **Analyzing and judging**
   Aiming to systematically research subjects.

Function information

Results

- Contribution to the IT sourcing policy
- Measurement data on the results of the total sourcing process
- Contribution to the integration of business processes with those of the service provider, including changes to the process
- (Long-term) relationships with service providers for good service level management
- Contribution to the creation of a strong cultural fit with the IT service provider
- Valuable feedback from relevant stakeholders
- Contribution to improvement projects

Tasks

- Participating in the formulation of the IT sourcing policy
- Participating in the development of the sourcing process and the collection of achieved results
- Participating in the formulation of performance indicators for the integration of business processes, including the formulation and execution of a business process integration plan
- Identifying possible business/process changes and participating in formulating service modification requests
- Building, guarding and potentially intervening in the relationship with the IT service provider and IT professionals
- Identifying cultural differences with the IT service provider and resolving them where possible
- Identifying types of relevant stakeholder feedback
- Analyzing aspects in the IT sourcing business case that are not achieved

Knowledge

- Knows the aspects of service management relevant for a sourcing policy
- Knows the problems and challenges in maintaining a relationship with IT service providers
- Knows the aspects relevant for general sourcing processes and the integration of processes with the IT service provider
- Recognizes cultural differences and points them out
- Knows different methods for gathering stakeholder feedback and how it should be interpreted
- Is able to read a business case and compare it to actual results

Experience

- > 2 years experience in maintaining relationships with IT service providers
- > 2 years experience in managing agreements with other parties

(Appendix continuous on next page)

Competencies: Definition, Behaviour and Goal

Domain: Operational Strength			
	Competency	*Behavioural anchor*	*Behavioural goal*
	Accuracy Effective use of and consequent attention for detailed information.	❑ Works tidy ❑ Handles tasks decently and precise ❑ Strongly focuses on a task ❑ Does not quit before the task is completely finished ❑ Prevents mistakes ❑ Puts energy in reviewing work for errors	The service manager manages and governs service levels of IT service providers and IT professionals. The service manager tracks the exact performance and gives accurate feedback.
	Quality Orientation Setting high quality demands for products and services and acting on them.	❑ Is drive to offer quality ❑ Is focused at completing tasks in a good way ❑ Honours quality agreements ❑ Prevents mistakes ❑ Delivers top quality	The service manager is an important discussion partner for the contract manager and provides him with high quality information. The service manager supports the contract manager with his tactical level knowledge.
	Result Orientation Being focused on the realisation of goals and results.	❑ Makes specific agreements with others on deliverable ❑ Stays focused on the result when other things come up ❑ Makes an effort to realise goals ❑ Has a clear goal ❑ Searches for solutions when goal realisation is threatened ❑ Finishes tasks	Besides the own products, the service manager's goal is to gather results from IT service providers and IT professionals. The service manager cooperates with them to keep improving the services provided.
Domain: Conceptual Strength			
	Competency	*Behavioural anchors*	*Behavioural goal*
	Analyzing and judging Aiming to systematically research subjects.	❑ Distinguishes between main and sub issues in complex situations ❑ Research a problem before drawing conclusions ❑ Recognizes causes of circumstances ❑ Quickly focus on the core of the problem ❑ Knows what information is necessary for a conclusion ❑ Draws logical conclusions ❑ Distinguishes opinion from fact	The reports of the service manager, IT service provider and professionals produce on performance, may differ. The service manager analyzes the differences and judges what is correct.
Domain: Interpersonal Strength			

	Competency	*Behavioural anchors*	*Behavioural goal*
	Social Skills Effectively making contact with others.	❑ Approaches unknown people ❑ Moves easily in company ❑ Easily makes contact ❑ Knows how to deal with different kinds of people ❑ Shows interest in others	The service manager talks to many different people outside the organization. Different IT service providers and professionals require different ways of communicating. The service manager effectively does this.
	Convincing Using arguments and expressiveness in presenting opinions and ideas to retrieve consent.	❑ Controls conversations, also in unexpected situations ❑ Has a convincing attitude ❑ Supports own ideas with strong arguments ❑ Maintains own proposals without nagging ❑ Effectively plays difficult questions and objections ❑ Easily includes new information in his own story	The service manager is the point of contact for IT service providers and professionals on a tactical level. The service manager manages on performance and is therefore a strong convincer of the different parties.
	Cooperating Together with others, provide an effective contribution to a common goal.	❑ Stays constructive, even in disagreements ❑ Takes others insights seriously ❑ Asks for other people's opinion ❑ Honours agreements ❑ Takes other people's viewpoints in account ❑ Actively participates in group tasks ❑ Consults with others	The cooperation with the contract manager and IT professionals is very important for the service manager to effectively manage service levels. Also, a good cooperation with IT service providers is important for the improvement of provided services.
Domain: Personal Strength			
	Competency	*Behavioural Anchors*	*Behavioural Goal*
	Stress Resistance Being able to handle tension.	❑ Stays calm under pressure ❑ Remains flexible under stress ❑ Keeps handling in a controlled way under pressure ❑ Recovers from disappointments ❑ Keeps performing equally under pressure	The service manager has to confront IT service providers and professionals on their performance, which may result in pressures. The service manager effectively handles this and is determined in his judgement. When the relationship is under pressure, the service manager handles this professionally.