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INTERNAL REPORTING SYSTEM FOR OUTSOURCED IT SERVICES

Master of Science Thesis

ABSTRACT

This research was conducted as a part of an internal development project, which aimed to improve the reporting practices in Capgemini Finland. The research problem and the primary question of this study was to find out, how and through which processes the internal reporting can be improved in an IT service company. The goal was to find several ways to reduce costs of the reporting and make a well argued proposal for the company. Other goals were reducing the work of the service delivery managers and analyzing the differences between automatic and mechanical reporting. The final research methods that were selected were literature review, interviews, process modeling, documentation analysis and observing. This was a constructive multi-method single case study, which aimed to find solutions for the given problems by using qualitative data, which meant that empirical studies played a big role when the overall conclusions were made.

The given proposal advises Capgemini Finland to move its reporting processes to a more standardized system. Besides this a bigger part of the current tasks should be moved to India, which is one of the greatest long time goals for the company itself. The proposal starts with building a team for developing the reporting and provides a three phase solution that shows the first steps towards implementation. The implementation will be done during a period of six months and should be started immediately. By following the proposed steps the company will be able to save money and resources, both in Finland and in India. In order to gain more credibility for the project management support is needed. The final outcome of the whole developing process will be a cost reduction in addition to transferring the standardized tasks to India. What is more is weekly report that the production teams will get about their performance. The given proposal includes calculations that support the ultimate solution.

The research can be seen very useful for the company, since it raised points that need improvement and gave solutions for these. These improvements will most likely be taken into action in the near future. Even though the research raised at least as many questions as it answered to, it is mainly a positive thing; the topics for the further analyzes have been found: studying the possibilities of full automation and making financial calculations for the whole company are something that need researches of their own.

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TAMPEREEN TEKNILLINEN YLIOPISTO
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Tämä tutkimus tehtiin osana Capgemini Finlandin sisäistä kehittämisprojektia, jonka tarkoituksena oli parantaa raportointikäytäntöjä yrityksen sisällä. Tutkimuksen ongelma ja perimmäinen kysymys oli, miten ja mitä keinoja käyttämällä sisäistä raportointia voidaan parantaa IT-palveluja tarjoavassa yrityksessä. Tavoitteena oli löytää useita keinoja, joilla pystytään vähentämään raportointikustannuksia ja tehdä hyvin perusteltu ehdotus yritykselle. Muut tavoitteet liittyivät palvelupäällikön tehtävien vähentämiseen ja erojen analysointiin automaattisen ja mekaanisen raportoinnin välillä. Lopulliset valitut tutkimusmenetelmät olivat kirjallisuustutkimus, haastattelututkimus, prosessin mallinnus, dokumentaatioanalyysi ja havainnointi. Tutkimus oli konstruktiivinen, monimetodinen kertaluontoinen tutkimus, joka pyrki ratkaisujen löytämiseen laadullisen datan avulla. Tästä johtuen empiirinen tutkimus oli suuressa roolissa, kun tutkimuksen lopulliset johtopäätökset tehtiin.

Ehdotettu ratkaisu ohjeistaa Capgemini Finlandia muuttamaan raportointikäytäntöjään entistä standardoidummiksi. Tämän lisäksi suuri osa nykyisistä tehtävistä tulisi siirtää Intiaan, mikä on myös yksi yrityksen suurimmista pitkän ajan tavoitteista. Annettu ehdotus alkaa raportointiin keskittyneen tiimin rakentamisella ja tarjoaa 3-vaiheisen, 6 kuukautta kestävän ratkaisun implementaation käynnistämiseen. Noudattamalla annettua ehdotusta yritys pystyy säästämään rahaa ja resursseja, niin Suomessa kuin Intiassakin. Jotta projektin uskottavuus säilyy, on sen saatava taustalleen yrityksen johdon tuki. Kehitysprojektin lopputuloksena ovat kustannussäästöt, joiden lisäksi osa raportoinnista saadaan siirrettyä Intiaan. Lisäksi tuotantotiimeille pystytään tarjoamaan viikoittaiset raportit heidän suorituskyvystään. Annettu ehdotus sisältää myös taloudelliset laskelmat, jotka tukevat lopullista ratkaisua.

Tehty tutkimus voidaan nähdä erityisen hyödyllisenä Capgemini Finlandille, koska se nosti esiin kohtia, jotka vaativat parannusta ja sisälsi ehdotukset ongelmien ratkaisemiseksi. Annetut ehdotukset otetaan luultavasti käyttöön jo lähitulevaisuudessa. Vaikka tutkimus nosti esiin myös uusia ongelmia, se voidaan nähdä myös positiivisena asiana: raportoinnin automatisoinnin ja tarkempien taloudellisten laskelmien tekeminen ovat hyviä aiheita jatkotutkimukselle.

PREFACE

This research was a combination of fortunate coincidences. Getting a job in a new company in the spring of 2011 did not automatically include the chance and topic for the Master's Thesis, but after only a couple of months I had a blank document in front of me with only the title. The need for this research came from the department I was working in, which made it possible to include some colleagues to the project. And since I was about to start as a Service Delivery Manager in the near future, I had the reason for improving the reporting practices to make my own job easier. The upcoming study leave for the spring of 2012 set the ultimate schedule. And when the topic, resources, motive and timetable were given I was ready to start.

The actual research followed the usual guidelines: it started with a literature review, followed by an analysis and ending with results and conclusions. Beginning the research during the summer when most of the company was on holiday and the office was rather quiet had its drawbacks but it also gave the possibility to focus on the literature review and get the theory part out of the "to do" list. Kick off meeting in the late August gave the impulse for the interviewing part and even though the increasing workload and full working hours set their own restrictions, the research was made before Christmas as planned.

Even though the research was conducted on a one-man basis, there are many people to thank for. In spite of changes in the management in Capgemini Finland during the project, the ultimate goal remained and the resources were given when needed. The company also supported the research project by allowing the usage of working hours for the interviews and writing, which made it possible to finalize the thesis without taking time off from work. Having the possibility to plan the research mostly by myself taught a lot and showed the trust that the company has. A great acknowledgement goes also to TUT and the department of Industrial Management; flexible timetables and professional guidance helped especially when I was stuck with the theory and contents.

All in all, this was a project of only a few frustrations, several enjoyable moments and what is more it ended with a practical suggestion that will hopefully show its benefits in the near future. Now it is done and so am I.

Espoo

19.12.2011

Joonas Leppävuori

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ABBREVIATIONS

AM	Application Management
CMMI	Capability Maturity Model Integration
COBIT	Control Objectives for Information and related Technology
IM	Infrastructure Management
IS	Infrastructure Services
IT	Information Technology
ITIL	Information Technology Infrastructure Library
ITO	Information Technology Outsourcing
ITSM	Information Technology Service Management
NQS	Nordic Quality System
OGC	Office of Government Commerce
QMS	Quality Management System
SAM	Software asset management
SCOM	System Center Operations Manager
SD	Service Desk
SDM	Service Delivery Manager
SEPG	Software Engineering Process Group
SLA	Service Level Agreement
SQA	Software Quality Advisor

1. INTRODUCTION

1.1. Background

Since the mid-1990s outsourcing has been a fast growing aspect of the world economy. Several companies among different areas of businesses have been outsourcing their functions in order to gain benefits. The most relevant strategic benefits for firms are means to reduce costs, improve asset efficiency, and increase profits. (McKinsey Global Institute, 2003) On the other hand Manning, Massini, and Lewin's (2008) survey indicates that the search for foreign talent has risen to number two rank, just behind cost savings, as a strategic driver for offshoring. Outsourcing and offshoring are sometimes used as aliases (Lacity et al. 1996), but in many cases the difference between these two is that offshoring is done overseas whereas outsourcing can be done also locally. (Collin, 2006)

The beginning of outsourcing can be traced all the way back to the historical times, when it was a common practice for farmers to hire groups of migrant during the harvest time or for construction companies to subcontract elements of subsystem construction (Cross, Earl, & Sampler, 1997), but the actual term was taken into general use in 1980's. (Greaver, 1999) So far the outsourcing of manufactured goods has been far more advanced than in services. In comparison with the $16.13 trillion in goods, the total of world trade in services was only $3.7 trillion (WTO, 2009). The growth rate of services has been much higher in recent years (UNCTAD, 2004). One reason for this is that services outsourcing requires less expensive infrastructure and less time to execute than the relocation of manufacturing operations and it is also adopted much faster. According to An Information Technology Association of America (ITAA, 2003) most foreign outsourcing from the US is conducted by large IT companies and programming and software engineering positions are the ones most likely to be outsourced. The same survey found that 12 % of IT companies had outsourcing operations overseas.

Nowadays the outsourcing companies, i.e. suppliers, are moving their practices more and more to the low-cost countries, such as India, Philippines and Poland. This phenomenon can be compared to the 1980s, when blue-collar workers in the US began to see jobs shift to locations in Mexico and South Korea. (Cohen and Zaidi, 2002) In the beginning of the millennium Forrester Research (McCarthy et al., 2002) estimated that only in the US approximately 400,000 IT-related jobs would be relocated abroad over the next fifteen years with the greatest outsourcing expected in software development, customer service, and call centers. This estimate was revised upward in 2004 due to a strong development in the demand. (Mears, 2004) This research has the focus on Cap-

gemini, which in 2006 was one of the large IT companies that had more than 15 % of their global employees in India, the other big companies being Accenture, Oracle, EDS, and IBM, just to name a few. (Contractor et al., 2011)

One of the main reasons for a company to outsource its IT and to hire IT consultants is that they are often seen as people who have the ability to enter a business with the aim of achieving results and without bringing other issues to the table. In other words IT consultants do not usually have any personal ties to the business, but they rather bring expertise and knowledge and work on improving the business. The history of IT consulting is very similar to other professional service firms, all of them being primarily reactive to client demand. Using the external consultants dates back to the beginning of outsourcing (1980s) and its second explosive growth began in the 1990s when Internet began to become commercialized. According to industry reports, the market for IT services reached $250 billion by the end of the 1990s, with the global IT consulting industry accounting for about half of that market at $135 billion. The large traditional players, such as Accenture, Capgemini and IBM, continued to struggle to adapt to the changing IT environment of the late 1990s and early 2000s. Nowadays the industry is very competitive and the demand is high for consultants since the industry is growing exponentially. (Essvale Corporation Limited, 2011) Different studies show that new and technical services, such as IT services, have become more and more important during recent years. (Eurostat 2006)

The changing industry and the rival competition offer a great environment for a research project. This thesis concentrates on studying the IT outsourcing business and especially internal service reporting in an IT company. The case company of this study is Capgemini Finland, whose mother group Capgemini Group is one of the largest IT consulting companies in the business. Capgemini operates in 40 different countries in Europe, North and South America and the Asia Pacific region. The revenue of Capgemini Group was 8.7 billion Euros in 2010 and it has approximately 110,000 employees. Capgemini Finland's portfolio consists of three main service lines: consulting, technology and outsourcing services. This research has the focus on the third sector, outsourcing services, which can be divided into two main groups and further on to several sub groups: application outsourcing, including application management, application development, application hosting and application testing; and infrastructure outsourcing, including data center & infrastructure services, network services, workplace services, security services and infrastructure transformation. The outsourcing sector covers approximately 60% of Capgemini Finland's total revenue and despite the ongoing recession, it has been growing steadily during the last few years. The typical clients include both private and public companies from several business areas, such as retail, hotel and banking industry and logistics. (Capgemini Finland, 2011)

When it comes to Capgemini, or any other outsourcing supplier, one of the key factors is that the business has to be done with small expenses. (Contractor et al., 2011) That is

why also the internal processes within a company must work efficiently and with low costs. The revenues are made of client transactions, which means that resources should not be used to inefficient actions. Because of the characteristics of the business and its intangibility, some of the services are easily moved to lower cost countries. The competition is also very hard, which means it is getting more and more difficult to gain big profits. (Essvale Corporation Limited, 2011) Like in any other area of business, also the clients in the IT sector are expecting great value for their money, which means that the quality of services has to be excellent or delivered at a low price. Since IT outsourcing business is highly professional, it can be difficult to reduce cost without having an impact on the quality. This is why it is important to deliver high quality and to be able to prove it. (Contractor et al., 2011)

Besides monitoring and auditing, reporting is one of the most relevant things when it comes to proving a certain service level. Efficient reporting practices reduce the extra work load and collect the data to the right place in the right form. It also enables to analyze the data later on. (Epstein, 2008) These reports can be used for providing customers the monthly service levels but also as a tool to improve the internal processes. There are several software programs in the market that can collect the data, but the problem is that different clients have different needs and the software may not be able to cooperate with all the applications. These programs are also often very expensive, so it can be difficult to select only a few to use with all the clients. (Dresdner, 2004) Thus also mechanical data gathering and reporting is needed and usually this job belongs to the service delivery managers. The problem is that mechanical creating of the reports demands a lot of resources, since all the data is scattered all around the company and its systems. In order to improve the reporting and also the whole performance of the company it is vital to have common practices for reporting. This will improve the reports and also has a positive impact on the whole business, which are needed when delivering high quality services. (Capgemini Finland, 2011)

1.2. Research problem, goals and scope

The research problem in this study is that the current reporting practice in IT outsourcing services at Capgemini Finland is not optimized for efficiency. The primary question of this study is how the internal reporting can be improved within an IT service company. The question can be divided into three sub questions:

1. How, through what kind of a process, is the internal reporting currently carried out?

2. What are the improvement needs in the current process, when seeking reporting efficiency?

3. How should the internal reporting practice be developed, to increase reporting efficiency?

The goal is to find several possible ways to reduce costs of the reporting and make a well argued proposal for the company. Another goal is to reduce the work amount of the service delivery managers. The study also aims to analyze the differences between automatic and mechanical reporting and find a system that suits best the needs of the company. The main interest of Capgemini Finland to conduct this study is to standardize the internal reporting practices so that some parts of the process can be moved to India. This would reduce the amount of work needed in Finland, which would reduce the ultimate costs of reporting. Another reason for the internal reporting developing is keeping the production teams up-to-date with the current status. This would bring more knowledge to the company and hopefully better service levels which may lead to better customer satisfaction. Reaching the desired service level can be seen as the third goal set by the company.

The given suggestions will be justified by financial calculations. As a result the study presents a new internal reporting guide for Capgemini Finland's IS department, which could probably be used later on for the whole company. Because the study is a development project for the company, the perspective is strongly an internal one. That is why the basic idea is to analyze the current situation and find improvement possibilities for it. This does not mean that innovative ideas are not welcome, but the starting point is to improve the current system.

The study is limited to IT services, since the whole outsourcing business can be seen as a too wide and complex area. Some examples are used to describe the overall outsourcing decisions, risks and advantages. Since the area of business is global and because the company behind the study is international, it can be justified to include global perspective for the research. The timeframe for the literature data is from 1990's to present, but due to the rapidly changing environment the main focus is in the 2000's. The analysis was limited to cover clients from the retail sector, in order to keep the amount of information reasonable. This was also in line with the company's wishes and provided a better outlook to the actual improvement areas.

There are three underlying assumptions that provide the basis for this study. Firstly, it is expected that the current reporting in Capgemini Finland is not on the desired level and needs an improvement. Secondly, it is assumed that good reporting enables better service for the customers. Thirdly, in order to make the reporting effective, there is a need for standardizing it on a certain level. Since the company is a public one and continues its business, it would not be ethical to provide the names or details of the actual customers that have been analyzed during this research. It is also restricted to describe the whole reporting process in detail, but the practices are presented in a way that enables the research. In some cases certain facts may have been changed or modified in order to maintain the confidentiality but in these cases the actual message behind the text stays the same.

1.3.   Structure of the report

This thesis consists of eight chapters. It starts by introducing the used research methods, which is followed by a literature review. The literature review includes an overlook to IT outsourcing as a business, general information about IT management and strategies and also guidelines to efficient internal service reporting. The reporting part of the literature review can be seen as the most valuable for the study, since it provides the theory part for reporting, which is later compared to the practices that are used in Capgemini Finland.

The fourth chapter presents the company behind this study, Capgemini Finland, and introduces its offering, business environment and quality systems. It is followed by an analysis of the current state of reporting in the company. The analysis part is strongly based on the interviews and therefore is the most informative chapter of this study. The sixth chapter is the actual proposal that is made for the company, including financial calculations and scheduling for the changes. The last two chapters, discussion and conclusions, summarize the whole study and evaluate its success.

2. RESEARCH METHODS

This was a constructive, multi-method single-case study which aimed to find solutions for the given problems by using qualitative data, which meant that empirical studies played a big role when the overall conclusions were made. The greatest difference to the quantitative research is that this research aimed to generate a theory whereas quantitative research focuses on testing one. Also the ontological orientation was towards constructionism whereas the quantitative research relies on objectivism. Thirdly the epistemological orientation in this qualitative research was interpretivism, but quantative research focuses on positivism. (Bryman & Bell, 2003) In order to get reliable results that would cover the whole research topic, multiple research methods were used. On one hand this demanded a lot of work and resources, but on the other hand it would have been unprofessional to only analyze old reports and make conclusions based on the subjective views. The methods that were selected for this research were interviews, process modeling, documentation analysis and observing.

Interviewing part was selected in order to get a good insight to the reporting from the actual reporting professionals. The interviews were semi structured, which means that the interviewer had a series of questions that were in the general form but was also able to vary the sequence of questions. This model keeps the interviews more flexible and it allows the interviewer to ask further questions in response to what are seen as significant replies. (Bryman & Bell, 2003) Process modeling was made by using a basic flowchart, a method that is often criticized for showing only a single view of the process model. (Holt, 2009) In this research this was not an issue since the purpose of modeling was to see the big picture and find the parts that needed improvement the most. The documentation analysis finalized the analysis and was selected in order to see what the final outcome of the whole process is. Using this method was justified since it is often seen as a very flexible method that can be applied to a variety of different media. (Bryman & Bell, 2003) Since the author was responsible for reporting in another service, the observing was an obvious choice as the fourth method for the research.

The example service that was studied was a partnership with a Finnish retail company, which is one of the most important customers for Capgemini Finland. This example provided the basis for the process modeling and also provided the data for documentation analysis. Most of the interviewees were working for this customer at the moment or had been in the past. Selecting this customer as an example was in the wishes of Capgemini Finland and it was justified by its significance for the company. Even though the focus was strongly on this particular service, also other services were taken into account especially during the interviews.

2.1.   Interviewing the professionals

Interviewing the professionals helped to get a good insight into Capgemini's way of producing internal reports. It also provided a good basis for the final suggestions that are given in the last chapters. Out of the three original research questions, this part gave answers to two: What are the improvement needs in the current process, when seeking reporting efficiency? How should the internal reporting practice be developed, to increase reporting efficiency? The actual interviews were conducted by using the basic theory for qualitative interviews and they can be seen as theme interviews. The interviewing process followed the normal guidelines: planning, executing, analyzing and interpreting.

The interviewing part of the research was probably the most valuable phase, because it brought a lot of deficiencies to the table and also provided several development ideas for the current processes. The total number of interviewees was 8, including 3 SDMs from the service management side and 5 technical leads from the production side, all from the same department within Capgemini Finland. The service delivery managers had a good understanding of the reporting process within the company or the service and were able to give good and useful suggestions whereas the people from the production side gave the technical limitations and held the ideas applicable. The employees had been working for Capgemini from 1.5 up to more than 10 years, so they were aware of the processes that were being developed. The leader of the project selected the first interviewees by choosing the best suitable persons but later on the selection included also the snowball effect selection. After each interview the interviewees were able to suggest people who they saw valuable for the project and who had a good understanding of the reporting process.

The interviewing sessions were recorded with a tape recorder and the interviewer also made notes during the discussion. A single session started with easy questions that made the interviewee comfortable and helped to relax in the situation. Usually this was not a problem, since the interviewees knew the topic very well and were eager to tell their opinions. The easy questions were followed by a group of questions that opened up the main topic, but did not go too much into the detail. This way the interviewees got into the subject and it also helped the interviewer to understand the aspect. Further on the interview went more into the detail and actual suggestions arose, which was the main goal of the whole interviewing process. In the last phase the interview was ended with ending questions that gave a soft landing for the interviewees. Also the premade flowchart was analyzed and improved based on the suggestions. One session took 42 minutes on average, which was enough to get the right atmosphere on and get a little feedback at the end. After the sessions the data was analyzed and rephrased by the author and sent back to the interviewees for possible corrections. The questions asked varied a little between the interviewees, but the overall structure remained the same. The original structure is presented in the Appendix 3.

The answers were analyzed and compared to each other between the interviewees. Certain trends or similar opinions were looked for in order to get good suggestions for the improvement. Also differences between the opinions were something that was seen valuable since they brought discussion and raised important topics to the table. In order to keep the interviews reliable, the questions were not delivered before the actual interview. By doing this it was more likely to get honest, intuitive answers and not homogenous, predefined suggestions.

2.2. Process modeling based on the interviews

Process modeling aimed to give answer to the first of the three research questions: How, through what kind of a process, is the internal reporting currently carried out? In order to get a picture of the reporting processes within Capgemini, the current reporting methods had to be analyzed. This was done basically by creating a process model that covered the whole reporting process starting from the customer demands and ending to the final report. This model was pictured in a flow chart and updated during the research process. The very first version of the flow chart was made by the author, based on the experiences in other services, but when moving on with the study colleagues and other professionals fulfilled the chart with their own ideas and opinions. This way a reliable chart of the current reporting process in Capgemini was pictured. Of course this was a subjective estimation of the ongoing situation, but it gave a good overall picture that could be improved later on.

The very first version of the flow chart is not included in this thesis, since it was just a tool to get the others' ideas moving. At first the flow chart was made by using the brown paper technique and post-its. Later on it was moved to digital form in order to make corrections. This version of the flow chart is pictured in the chapter 5 and the version with suggested corrections in the chapter 6. Because the employees had very diverse opinions about the process, the final version was sort of a compromise of everyone's thoughts. Internal reporting process was also being followed for a few months period, which helped to get the first picture of the whole process. Even though maybe a bit subjective this observation phase was extremely important when the final suggestions were made.

2.3. Documentation analysis

In order to get a picture of what is the outcome of the whole reporting process the final documents of the process, monthly reports, were analyzed. Since this gave a good look into what the customer sees, it can be seen that the documentation analysis gave answers to all of the research questions in some level. The importance of the documentation analysis for this research was still a minor one, especially when compared to the interviews, since the documents do not show all the challenges and bottlenecks in the process.

The documentation analysis was based on the monthly reports that were delivered to a selected client. The timeframe was restricted to the ongoing year in order to keep the total amount of reports reasonable. The other option would have been to analyze the previous reports from a certain period of time, but it was in the interests of the company to keep the focus on possibilities rather than in the history. Even though the reports were not internal, they provided information about the contents of the reports that could be used in the analysis. Capgemini Finland has also a reporting template of its own, which was compared to the actual used ones. Client reports can be seen as the result of the internal reporting in a service and therefore are an important part of quality management.

The documentation analysis started by collecting monthly reports of the selected example customer. The data was stored in the company database and was easily accessible. To maintain confidentiality, the name of the client is not mentioned in this study, but this does not affect the final analysis, since the focus is on internal reporting. The collected reports were analyzed by including the report to the interviews, so that the interviewees were able to give their ideas about the report. The most relevant things that were to be found were the validity of the data and the source of it. The analysis included a subjective part that was focused more on the readability, understandability and clearness of the reports. The content of the documents was also compared to the findings in the literature review about service reporting.

2.4. Observing

Selecting the observing as a research method was unavoidable, since the author was responsible for client reporting in another service. Even though the original idea was to get opinions from the senior colleagues, observing gave the good basis for understanding the process as a whole. So it can be seen that this method gave answers to the first research question: How, through what kind of a process, is the internal reporting currently carried out? It also helped to bring relevant questions to the table in the interviewing phase. The observing was conducted by finding deficiencies in the author's reporting process, but since the procedures were not structured or especially planned, it can be seen that its scientific role in this study was a minor one. When the final suggestions were made, the observing played a minor role in order to avoid subjective suggestions and to keep the study reliable.

3. LITERATURE REVIEW

3.1. IT outsourcing as a business

IT outsourcing has been growing its popularity among companies of all sizes. (Lewin & Peeters, 2006) Since the IT function in an organization can have a significant role, it is important to make sure that these functions work properly. Managing the whole IT demands a lot of resources and can become very costly. When IT is not the actual core competence of the company it might be wiser to move the responsibility to external professionals. This is where the IT outsourcing companies see their business: delivering IT services to all sorts of clients with good quality and high professionalism. (ITAA, 2003) This subchapter describes the IT outsourcing environment by giving the basic definitions of the business, telling a bit of outsourcing development and by listing the most relevant risks, costs and benefits that IT clients and suppliers face when making an outsourcing relationship. Also the principles for successful IT outsourcing are presented.

3.1.1. Definitions of outsourcing and other concepts

Outsourcing is a term invented by the press in the late 1980s. It was selected to describe the growing trend of large companies transferring their information systems to providers. This sort of outsourcing services, however, can be traced back to at least World War II, when systems facilities management services were provided to the U. S. federal government. (Greaver, 1999)

According to Laudon & Laudon (2005) outsourcing is the process of turning over an organization's computer center operations, telecommunications networks, and/or applications development to external vendor. Information technology outsourcing (ITO) means handing over IT activities and assets to third party management for monitored outcomes. (Cullen & Willcocks, 2003) Another definition for IT outsourcing is "a process whereby an organization decides to contract-out or sell the firm's IT assets, people and/or activities to a third party supplier, who in exchange provides and manages these assets and services for an agreed fee over an agreed time period" (Kern & Willcocks, 2002). In this research IT outsourcing can be seen as a combination of these two; it is a process of turning an organization's IT operations and development to a third party supplier, who provides and manages these services for a certain period of time. This definition gives a clear picture of what is being outsourced and to whom and it also takes the IT characteristics into consideration. The relationship between the client, supplier and the project/service is described in the following Figure 1.
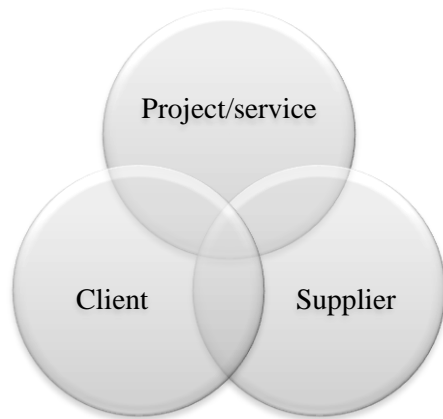
Figure 1. Components of outsourcing (modified from Power et al., 2006)

Other terms that are strongly related to outsourcing, and sometimes even mixed with it, are explained in the following Table 1.

Table 1. Outsourcing and other related terms

Action	Definition
Insourcing	All or most activities are kept in-house (Solli-Saether & Gottschalk, 2010)
Subcontracting	Moving part of the operations of a certain project to an external contractor (Collin, 2006)
Outsourcing	A process of turning an organization's operations and development to a third party supplier, who provides and manages these services for a certain period of time. (Kern & Willcocks, 2002)
Selective outsourcing	Sourcing selected IT functions from external providers, while still providing between 20 % and 80 % of the IT budget internally. The vendor is responsible for delivering the result of the outsourced IT activities, while the client company remains responsible for delivering the result of the insourced activities. (Lacity et al., 1996)
Infrastructure Services (IS)/IT outsourcing	Systems development and support is done by an external company as well as infrastructure operations and management. (Solli-Saether & Gottschalk, 2010)
Business process out-	Business process design/operation and systems building is

sourcing	done externally. (Solli-Saether & Gottschalk, 2010)
Transformational outsourcing	An emerging practice, where companies are looking outside for help for more fundamental reasons; to facilitate rapid organizational change, to launch new strategies and to reshape company boundaries. The outsourcing partner provides a management team that is experienced in the capability that the organization seeking change needs. (Linder, 2004)
Total outsourcing	The costs of the outsourced functions represent more than 80 % of the total (IT) budget (Lacity et al., 1996)
Global outsourcing	Migrating business process overseas (Solli-Saether & Gottschalk, 2010)
Offshoring	Moving outsourced operations overseas (to low-cost countries) (Collin, 2006), often used as an alias for outsourcing (Lacity et al., 1996)

When comparing the normal outsourcing to IT outsourcing, the greatest difference is what is being outsourced and how. In IT outsourcing the moving part might be application development, network technology or updating services. These parts do not require a lot of physical movement but are more like moving the knowhow to different location. (Laudon & Laudon, 2005) In the general outsourcing the moving parts are often people, machines or even factories, which means that a lot of physical movement is needed. This can be seen especially in the manufacturing business. (Kern & Willcocks, 2002) Nowadays a bigger part of outsourcing is IT outsourcing, which has led to a situation where these words are used as synonyms. (Laudon & Laudon, 2005)

3.1.2. History, trends and motives for IT outsourcing

Historically, outsourcing was used when organizations could not perform, because of incompetence, lack of capacity, financial pressures, or technological failure. The traditional way of thinking in IT outsourcing is moving the IT function out of the organization and let another company handle it. No strategic thinking can be seen behind the decisions, except the idea of solving problems, saving money or improving a certain function. (Cross, Earl, & Sampler, 1997) Historically general outsourcing is similar to subcontracting, joint venturing, and strategic partnering concepts, which were invented hundreds of years ago. In the past it was a common practice for farmers to hire groups of migrants during the harvest time or for construction companies to subcontract elements of subsystem construction. (Cross, Earl, & Sampler, 1997)

During the past years there have been changes in the global businesses, which have caused outsourcing to become an important restructuring tool. Those changes are presented in the following Figure 2.

Changes in the demand			
Demand for a focused management and for a quick response	Competitive pressures are getting more severe	Cutting edge technology and knowledge are now expensive to acquire	Significant operating and financial performance improvements are critical to success

Changes in the global business			
Performance, growth, and size are not predictors of future profits	Large size is not a competitive advantage anymore	Employing technical specialists internally is unnecessary	Small niche competitors can now change industries

Need for outsourcing

Outsourcing contracts often run for years and can represent tens of millions in value, with the typical information systems contracts even running up to hundreds of millions
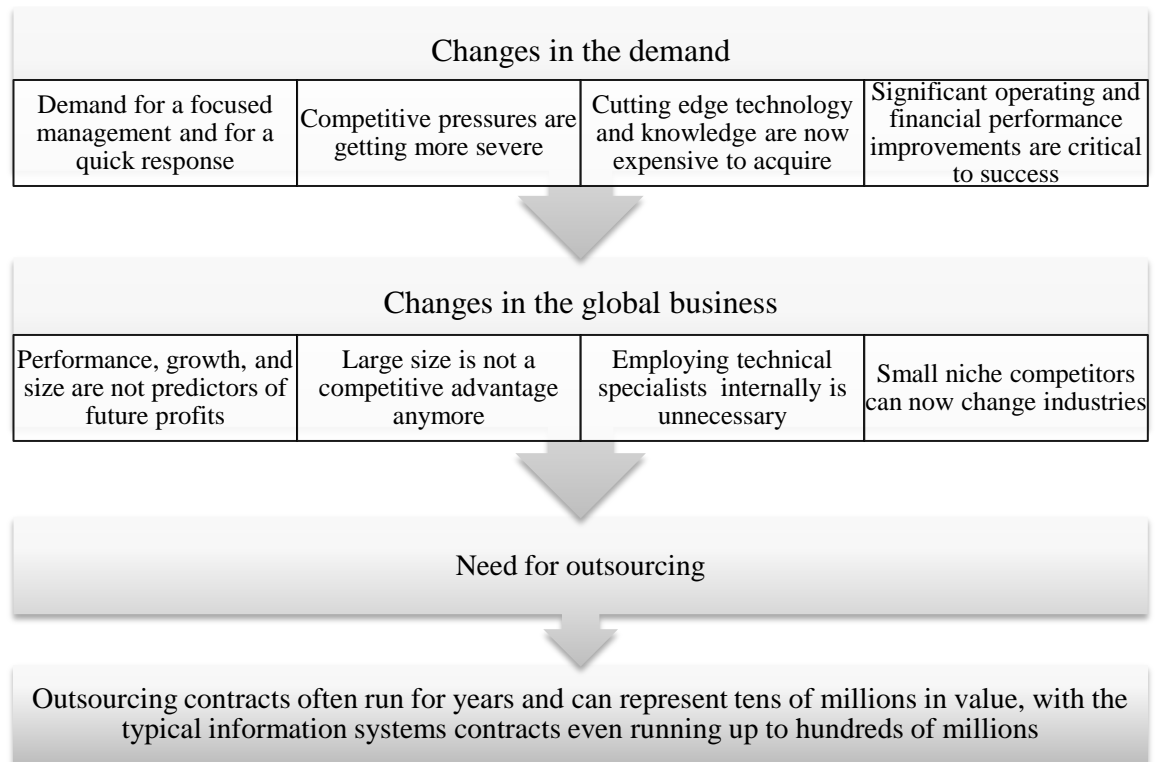
Figure 2. Changes behind outsourcing (Greaver, 1999)

Nowadays outsourcing is used to restructure organizations that may have been quite successful. These organizations now recognize that management's attention on building core competencies and serving customer needs is what really matters. Anything that distracts the company from this focus can be considered for outsourcing. The updated way of thinking is to make IT outsourcing part of a strategic transformation of the IT function, where new tasks and roles are implemented to replace old tasks and roles. (Cross, Earl, & Sampler, 1997)

Today the vast majority of organizations outsource some of their IT services (Cullen et al., 2001), which has been a rising trend. Some economies, such as the UK and USA, averaged a higher than 15% annual increase in supplier revenues between 1995 and 2002. (Cullen & Willcocks, 2003) Outsourcing has enabled organizations to survive the rapid pace of change at a time when business activities need to be focused on the right activities and resources need to be kept lean and aligned with the core business. From the late 2000 a renewed emphasis on cost savings followed, with increased interest not only in IT outsourcing, but also in offshore and business process outsourcing as new sources of cost reduction. The following Figure 3 describes the amount of outsourcing in selected countries. (Cullen & Willcocks, 2003)
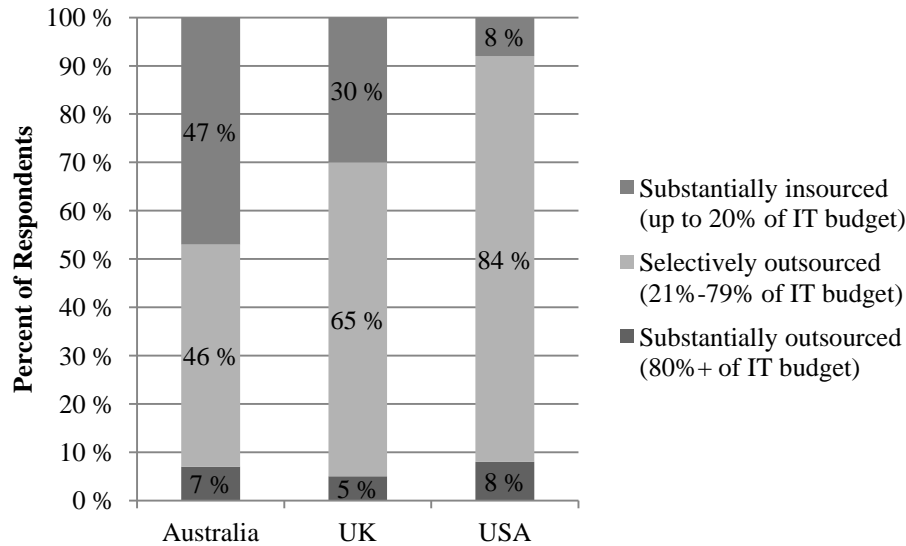
Figure 3. Level of outsourcing in selected countries (modified from Cullen & Willcocks, 2003)

Information technology outsourcing is now regarded as a standard IT management tool. The growth has been enormous, especially during the last decade. The global market revenues increased from $US9 billion in 1990 to forecasted $US154 billion by 2004. (Kern et al., 2002) Willcocks et al. (2002) found that by the end of 2001 roughly 72 % was spent on in-house IT, the rest on IT outsourcing, including 3% on business process outsourcing and 3 % on offshore outsourcing. It is estimated that the outsourcing will grow its portion as well as offshoring and business process outsourcing. As shown in the previous Figure 3 over half of organizations across the globe were outsourcing at least 20% of their IT budgets in the beginning of the millennium. (Cullen & Willcocks, 2003)

Even though the numbers are big, they might be even bigger since measuring the growth of services outsourcing is challenging. The lack of data related to services outsourcing has been widely noted and international organizations have been working to standardize data collection to reduce this problem. (Contractor et al., 2011) As global outsourcing grows (Lewin & Peeters, 2006) several international service suppliers have established service centers or delivery centers overseas and in low cost countries. During the last years there has been a trend towards a global outsourcing model where global vendor companies contract clients locally and produce services from their delivery centers in low cost countries. In this way suppliers get access to high qualified personnel with a much cheaper price. (Solli-Saether & Gottschalk, 2010) The following Figure 4 shows the connection between the clients, delivery centers and the vendor company.
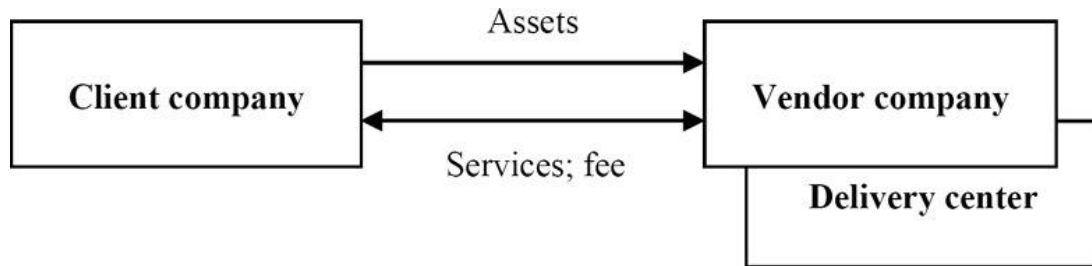
Figure 4. A model for outsourcing (Solli-Saether & Gottschalk, 2010)

There are several reasons why companies want to outsource their functions. The most obvious ones include lower costs, moving the risks to the supplier and access to the human capital. (Abraham & Taylor 1993) A study of McKinsey Global Institute (2003) stated that the primary motivations for outsourcing shift from a search for low cost labor, to a search for talent and new ideas. Thondavadi and Albert (2004) expanded this list by mentioning focus on core operations, improving quality, more rapid product development and product & process innovation. A survey by Deloitte (2005) found that 70 % of managers surveyed saw that cost savings is the reason for global outsourcing, while 57 % mentioned quality, innovation, or industry best practice. Another reason for outsourcing is that technology can enable outsourcing decisions by providing the ability to work in ways not previously possible, though it does not determine them directly. For example, separate teams half a world away are able to work on tasks simultaneously or in time-zone determined shifts. Besides these Contractor et al. (2011) suggested a long list of reasons for outsourcing, including: internal creativity limitations, the growing supply of foreign talent, knowledge clusters in emerging countries and the growing importance of foreign markets, development speed, broadening of knowledge, broadening scope of end-applications, deconstruction and routinization, the quest for flexibility and experience and scale economic in the provider companies.

A big reason for development in the IT outsourcing market has been India's capabilities to provide a good proportion of the world's application development work because of its large, highly educated and English-speaking workforce. India IT specialists work especially well for U.S. companies because of the different time zones. By using the advantage of having centers on the both sides of the globe, the companies are able to work almost around the clock. (Bragg, 2006) Even though the importance of India and other low cost countries may be growing in the IT sector, some functions are traditionally kept in Europe. The following Table 2 states the reasons for outsourcing and why certain jobs still stay in the Western countries.

Table 2. Reasons for IT outsourcing and why jobs still exist in the Western countries (Bragg, 2006; Contractor et al., 2011)

Reasons for IT outsourcing (Bragg, 2006)	Reason why jobs still exist in Europe and other Western countries (Contractor et al, 2011)
Reduced need for large capital expenditures for computers	Embedded or tacit knowledge cannot be externalized efficiently
Difficult managing of computer services	The costs of vertical integration exist but benefits will be seen in the future
Access to the supplier's staff	Delay risks in global supply chains
Moving to a new computing platform	Rising costs at offshore locations
Concentrating on the most strategically valuable corporate functions	Transaction cost considerations
Reducing the data center costs	Inefficiencies because of spatial separation
Moving the computing costs from fixed to variable	Certification and quality concerns
Saving on the space	Data privacy and security
Using a supplier for applications development	Fear of leakage of knowledge to competitors
Rollout of the upgrades throughout the company's computer systems	Xenophobia and protectionism in advanced economies
Suppliers are open to calls around the clock	Erosion of competitiveness in external service provider firms

Naturally there is a fear that the lower wage costs and other savings might lead to a situation, where a lot of jobs move from Western countries to Asia. On the other hand Mann (2003) argues that the globalization of software and IT services may create even stronger job demand in the developed countries for IT-proficient workers. For example price reductions on the hardware-side of IT, along with increased productivity, resulted in an additional $230 billion in Gross Domestic Product for the US between 1995 and 2002. Between 1993 and 2001, the increase in IT hardware spending was 6.7 %; while growth in software and services was 12.5 %. So it looks like most skilled service jobs are not only complements but also substitutes for similar jobs. (Mann, 2003)

In summary, outsourcing is no longer only about cost-cutting but also about closer connections, better service to clients, creativity, and innovation: "to open the enterprise up in multiple ways, allowing it to connect more intimately with partners, suppliers and customers and, most importantly, enabling it to engage in multifaceted, collaborative innovation" (Palmisano, 2006 according to Contractor et al., 2011).

3.1.3. Benefits and Problems in IT outsourcing

Empirical evidence suggests that carefully implemented outsourcing increases the overall performance of the firm. Outsourcing is generally considered as a very powerful tool to cut costs and improve performance. Through outsourcing, firms can take advantage of the best vendors in the business and restructure departments that might have been reluctant to change. Outsourcing can also help focus on the core business. Since building core competencies and serving customer needs are critical to firm success, anything that detracts from this focus may be considered for outsourcing (Barthelemy, 2003). The benefits of outsourcing, as well as the problems, can be divided to planned and unexpected ones. The following Figure 5 describes the situation.

Figure 5. Benefits and Problems in outsourcing (modified from Solli-Saether & Gottschalk, 2010)

At the right side of Figure 5, there are negative effects of implementing the IT strategy. Some problems are known, and these problems will be dealt with. However, there will be also new problems that were not thought of when making the IT strategy. These new problems cause an increase in negative effects from implementing the IT strategy. The same thing goes with the benefits: the company may be expecting smaller costs for IT but is not aware of the professionalism that the vendor company brings along. These unexpected benefits may be just as valuable as the benefits that were aimed for. (Solli-Saether & Gottschalk, 2010)

Benefits

The benefits the supplier company is expecting out of the contract are obvious: a new customer brings more revenues, which means more work to be done and maybe recruiting new employees. Successful business will hopefully lead to more profits and a bigger market share. These things can be seen as planned benefits. There are also several bene-

fits that the client company is expecting, when outsourcing its IT functions. Here is a list of some of the most relevant ones. (Solli-Saether & Gottschalk, 2010)

- Cost reduction and revenue increase
- IT function solving systems integration
- Improved communication and combination of information for decision-making
- Improved business processes and efficiency in value shop activities
- Knowledge management systems supporting knowledge sharing and creation
- Developing supplementary services to take advantage of opportunities
- Improving working procedures in accordance with the vision
- Attracting knowledgeable people in the labor market
- Knowledge management technology enabling knowledge competitor role

Depending on the company and the outsourcing contract some of the previous benefits can be either expected or unexpected. Either way they bring more value for the both parties of the contract.

Even though outsourcing some functions of the organization is often beneficial there are always risks that should be taken into account. Some risks affect only one side of the outsourcing relationship, some of them both and some might even have an effect on the whole industry or the structure of the labor market. According to Contractor et al. (2011) changes in the professional service labor market are more harmful to national economies than manufacturing outsourcing, because of the high-value jobs involved.

Problems/costs known

The risks that the supplier company has are those of losing a customer and reputation. There are also other risks that the client should evaluate before making the final decisions about outsourcing. According to Langfield-Smith & Smith (2003) there is always a level of risk associated with alliances, compared to in-house activities, for example difficulties in gaining cooperation with partners who have different objectives, and the potential for exploitation of the dependence relationship that exists between partners. Service providers also provide IT capabilities that are often not flexible enough to meet changing requirements. Relationship with a supplier often requires large investments. The client company becomes vulnerable if the supplier fails to meet its contractual obligations. (Ross & Weill, 2002) These risks can be either expected or unexpected, depending on the situation on hand. (Solli-Saether & Gottschalk, 2010)

Bragg (2006) presented a long list of risks that can have a big impact on the business of the client company. Outsourcing the applications development function may cause that company loses its best programmers. When this function is outsourced, the programmers may leave because they feel insecure in moving to the supplier. Another reason is that at the same time software search firms realize the chance to offer a job to program-

mers, who are going through a period of great uncertainty and might be interested in considering competing offers. When using an application development provider there is a risk that the quality of the resulting software code does not meet its demands.

Another risk with IT outsourcing is the security issues. Some companies may have developed programs that they consider too valuable to be given to the supplier because of the competitive perspective. This is because the supplier may copy the code or parts of it into programs it is developing for other companies. It is also possible that a supplier's response levels will not be as good as when using the internal resources. There is a risk that services levels may drop when outsourcing, but this can be monitored and corrected with penalties and sanctions. (Bragg, 2006)

Another risk or a problem that keeps some companies from outsourcing is the sales-oriented nature of the supplier company. A supplier's staff is always looking for additional work opportunities and their ability to find these issues may be a large factor in promotions and pay raises. This means that there is a risk that the supplier sells functions the client is not really in need of. A concern for many client companies is that they may have trouble transferring their software licenses to a supplier, which can bring extra cost or delays. (Bragg, 2006)

There are many reasons for moving at least some parts of the computer services functions to a supplier. Some functions, such as data center operations, can be moved because of lower costs, while other functions, such as network management and the help desk, can be transferred because of they present a low strategic value. Anyway it is always important to balance the possibility of losing quality professionals during the transition to the supplier, as well as risking the spread of knowledge to competitors. (Bragg, 2006) Like marriage, if done poorly outsourcing is much easier to consummate than it is to terminate, and recover from. (Greaver, 1999)

Problems/costs unexpected

Even though saving in costs is one of the main reasons for outsourcing, the actual process might also get expensive for the company that is outsourcing some of its functions. There are several obvious problems and costs but also hidden ones that should be taken into consideration when making the contract. For global outsourcing the role of transaction costs can be seen almost as significant as production costs. (Qu & Brocklehurst, 2003) For example Cullen and Willcocks (2003) found the cost of post-contract managing ITO deals falling regularly between 4–8 % of the total cost of the deal. The problem is that these expenses may not be calculated when making the contract with the supplier. In that case the organization runs a high risk of being one of the many who have disappointing experiences, including lower than anticipated, or even nil, cost savings.

According to Solli-Saether & Gottschalk (2010), Barthelemy (2001) identified four categories of hidden costs that the company that is planning outsourcing should take into consideration:

Vendor search and contracting. Many enterprises underestimate the amount of time, money and resources to identify and evaluate suitable IT vendors, select a finalist, and negotiate the contract. Companies spend a lot of money before even spending the first dollar on the actual work. And even if not a lot, it also costs something just to think about IT outsourcing.

Transition to the vendor. Switching in-house IT activities to a vendor brings hidden costs that are probably the most difficult to realize. Most managers are unable to analyze transition cost and the companies do not realize how much they have spent until the whole transition is complete. It can take even months before the vendor knows as much as the internal IT department and it is hard to say exactly when the vendor has taken over the business.

Managing the effort. Managing the effort is most likely the largest category of hidden costs because it covers three areas: monitoring to see that IT vendors fulfill their obligations, bargaining with IT vendors and negotiating any changes needed in the contract. Unlike outsourcing fees, vendor-management costs for IT outsourcing are not easily visible. Since a company knows what it pays to the vendor many businesses outsource to find out how much they pay for IT.

Transitioning after outsourcing. The fourth hidden cost comes from switching vendors or reintegrating IT activities in-house. When activities are redirected to a new vendor, the costs include finding the vendor, making a contract and transitioning the resources all over again. When activities must be reintegrated, the cost involves building a new internal IT activity out of nothing.

Companies neglect the hidden costs of IT outsourcing too easily. Overlooking these hidden costs is unwise, since it can bring a lot of damage for the company. A better way to act is to manage the four costs proactively and to spend some extra time and resources in the early stages of the outsourcing effort. (Barthelemy, 2001 according to Solli-Saether & Gottschalk, 2010)

When a supplier is bidding for an outsourcing contract, it should take into consideration all the costs connected with the take-on of the contract, and also the costs that arise from the expiry or termination. The supplier will probably assume that it will be able to cease paying sums to third party when it stops receiving revenue from the customer to cover the costs. After all one major area of costs will be left to the supplier where the costs cannot be turned off quite so easily: the costs of the ongoing employment or termination of employment of the staff that have hitherto delivered the service to the customer. (Foster, 2003)

3.1.4. Successful IT outsourcing

So what does it demand to implement the outsourcing process successfully and keep the relationship working? Beaumont and Costa (2002) studied information technology outsourcing and found four factors that contributed to successful outsourcing: a tight contract, a partnership, a change process, and the IT manager's role changing from managing projects and operations to acquiring and managing the internal and external resources required to do the organization's IT work. Solli-Saether & Gottschalk (2010) presented a list of other important factors that will have positive effect on the vendor-customer relationship when outsourcing IT functions. These factors are especially from the vendors' point of view.

- Providing complementary core competencies, such as personnel, methodologies and services, to the outsourcing partner
- Enabling the outsourcing partner to integrate and exploit strategic IT to produce competitive goods and services.
- Minimizing transaction costs by reducing the need for lasting specific IT assets
- Providing a complete IT contract based on information symmetry
- Developing experience with alliances and developing the ability to identify potential clients
- Developing and providing secure common norms that are relevant to both parties
- Enabling social and economic outcomes in the exchange with the outsourcing partner
- Providing information to the outsourcing partner
- Implementing a strict and rigid division of labor with the outsourcing partner
- Creating efficient and effective communication with and between stakeholders

Besides these, there are also some other critical success factors for IT outsourcing. This list supplements the previous list with a customer's point of view. (Gottschalk & Solli-Saether, 2005):

- Having a complete IT outsourcing contract
- Making it easy and inexpensive to find out what the vendor is actually doing
- Defining the IT needs and manage IT services from the vendor
- Integrating and exploiting strategic IT resources from the vendor together with own resources to produce competitive goods and services

When it comes to offshoring there are some specialties that should be taken into consideration. From the supplier's perspective, the key success factors of offshoring with global delivery centers can be summarized as follows (Solli-Saether & Gottschalk, 2010):

- Planning and project management are especially important for offshoring success. When preparing offshoring, planning should be a great priority.
- Using proven good practices and methods, and carefully selecting right leadership onshore and offshore
- Not underestimating the importance of personal relationships
- Expectation management towards the client is important to ensure adaptation to new processes and language requirements
- Carefully planning knowledge transfer
- Involving delivery center as early as possible promotes ownership and understanding
- Offshoring increases the need for clear and specific communication

In conclusion, outsourcing is a combination of different tasks that are moved to external provider for a selected period of time. The reasons behind the outsourcing may vary between the businesses and companies, but usually the goal is to reduce costs, improve quality or share the responsibility. In service industry and especially IT business the trend is towards low-cost countries, which means that the selection of the service provider has to be done extra carefully in order to avoid problems in the future. The next subchapter presents the IT service business and its characteristics as a whole and provides an insight to the complex IT world.

3.2. IT service business

Different studies show that new and technical services, such as IT services, have become more and more important during recent years. (Eurostat 2006) According to Senft & Gallegos (2009) delivering high-quality IT services is dependent on the delivery of high-quality applications and all of the processes in managing IT operations: capacity management, change control, security, disaster recovery, vendor management and so on. Another factor in measuring and delivering IT services is the possible dependencies on third-party providers of services, networks, hardware, and software. With all the complexity, delivering high-quality IT services is often very challenging. Especially an organization with a large volume of different type of applications makes the task of measuring service even more difficult. Defining services requires the organization to consider what services are important from a customer perspective. The client hardware and software, the networking components, the server hardware and software, and the database must all function together to deliver the final application to the end user. From an IT perspective, each individual platform must be available to deliver the service expected from the client organization. The processes that go into delivering platform availability include all aspects of IT. (Senft & Gallegos, 2009)

In order to understand the meaningfulness of service reporting it is good to take a look at the service management as a whole. According to Senft & Gallegos (2009) service

management is a process to define services, service quality, and measure and track performance in an organization and it is dependent on all areas of IT. Auditing plays an important role in service management by providing an objective review of the processes. Service expectations can be a very contentious area for an organization because of the trade-offs between service quality and cost. This subchapter presents the fundamentals behind service reporting and gives an overlook to the whole service business environment.

3.2.1. IT strategy

According to Praeg & Spath (2011) IT organizations need to face up to new challenges, since the daily business has changed from development and operation of information technology to the customer oriented provision and management of IT services. In order to survive in the market, service providers need to offer and manage competitive and distinctive IT services. This emphasizes the importance of high quality services as a strategic competitive factor.

Information Technology Infrastructure Library (ITIL) defines IT service strategy as how to design, develop, and implement service management as a strategic asset. Under ITIL and other best practices, the first stage of the service lifecycle is to develop a service strategy that helps moving IT organizations to a strategy aligned to customer needs and benefits. A primary goal of an IT service strategy is to create value for the customers. A well-defined strategy will enable an IT organization to better serve its customers. ITIL segments value to customers into two categories, utility and warranty, which can be seen in the following Figure 6. (Ryan & Raducha-Grace, 2010)

Utility	Warranty	Value Creation
• "What the customer gets" • Utility is measured on the basis of the number of "outcomes supported" and "constraints removed"	• "How is it delivered" • Warranty is measured in terms of the levels of Availability, Capacity, Continuity and Security	• The basis of differentiation in the Market Space
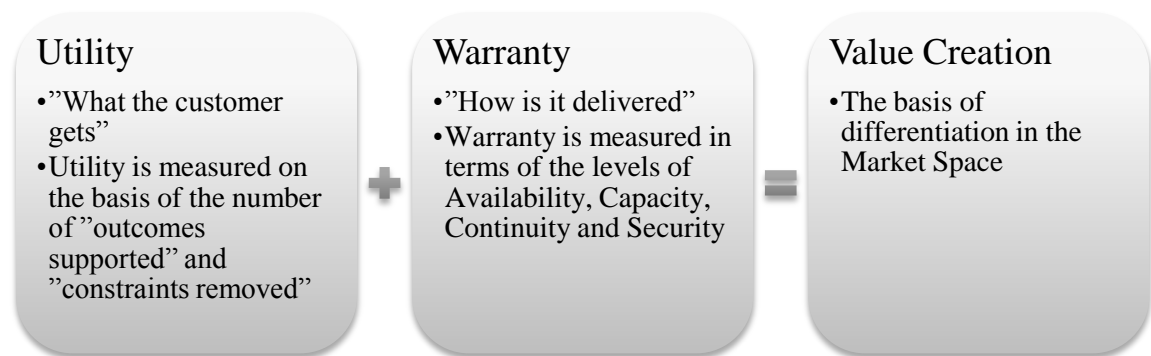
Figure 6. ITIL value-creation components (modified from Ryan & Raducha-Grace, 2010)

According to Ryan & Raducha-Grace (2010) both utility and warranty are critical concepts that an IT organization needs to include in the strategy approach and execution. If a supplier creates sufficient business value in the eyes of the customer through a combination of these two factors, the customers are also more likely to buy more services. Service utility is the output that the customers receive from the services, whereas the

service warranty is how the service is delivered. Everything an IT organization does have to be focused on customer value creation. Also the value creation must be measurable to the customers. Ultimately, the value that an IT organization creates for the client companies should be reflected in the financial results. According to ITIL framework, the value creation is reflected to the customers as shown in Figure 7.

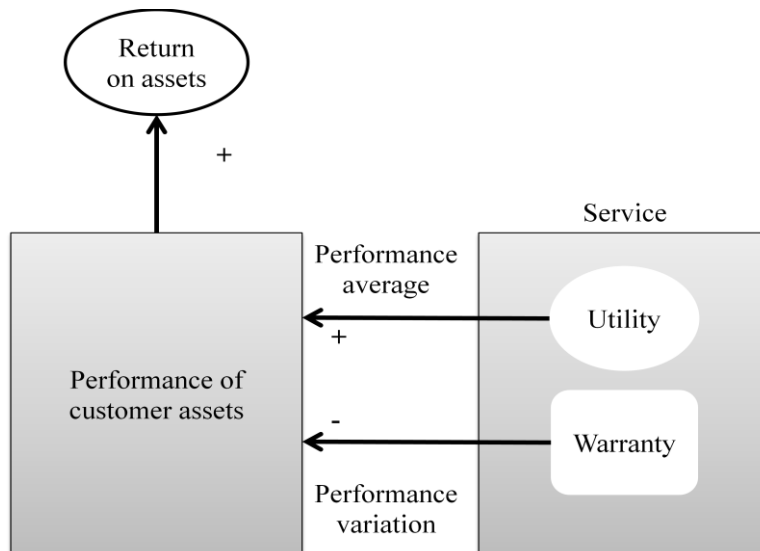Figure 7. Helping customers achieve value using IT services (modified from Ryan & Raducha-Grace, 2010)

There are certain things that should be considered when developing the IT strategy. These things include: (Ryan & Raducha-Grace, 2010)

- The scope of provided services: is the company trying to deliver services to the whole organization or to a single business unit?
- The value creation: is the company a low-cost provider or an innovative leader in the business?
- External factors: how do they affect the business?
- Performance management: what are the success factors?
- Skills alignment: are the resources in line with the overall strategy?

The strategy should be defined and articulated at a high level to keep the organization focused on its implementation. After determining the value proposition and overall service strategy a number of processes, such as financial management, IT service portfolio management and service catalog management should be leveraged to develop a detailed plan to translate the goals into action and evaluate benchmarks for these goals. The strategic positioning of an IT organization should also be periodically reviewed. For example, a number of IT organizations that started out providing almost exclusively mainframe services charged based on system utilization have struggled to evolve their strategy. Their customers now expect them to provide and have begun to see a leveling of

their revenue growth, which is often followed by eventual erosion of the revenue growth as customers outsource their IT needs to cheaper, more reliable commercial service providers. (Ryan & Raducha-Grace, 2010)

3.2.2. Managing and measuring IT services

When it comes to service management, the service managers develop and maintain the IT service catalog. They are responsible for developing service definitions, processes, Service Level Agreement (SLA) templates, service measurement, monitoring, and reporting tools. Service managers also play a vital role in understanding and reporting on service issues from all areas. They produce regular service reports from information provided by different technical teams. This reporting should be based on actual customer impact and show end-to-end delivery and highlight key business applications. This information is a key to the IT management in identifying trends that need to be addressed or communicated with the customer. (Senft & Gallegos, 2009)

Besides the general business management IT service management is an approach to operations that emphasizes IT services, customers, service levels agreements and best practice processes in the IT department. (OGC, 2005; Palmer, 2005) Senft & Gallegos (2009) completed the list by including understanding the services, designing services, identifying processes to engage services, pricing services, developing and negotiating service-level agreements, defining the metrics, measuring and reporting on services, managing service issues, and maintaining/updating services to the original description. According to Praeg & Spath (2011) a well-established IT service management not only helps to increase the quality of services but also supports the business value of service usage. The evaluation tools and quality frameworks play a big role in IT management. Several frameworks can be used to evaluate the level of service management and its success. Different reference models and frameworks such as ITIL, Control Objectives for Information and related Technology (COBIT) and ISO 20000 are widely used in many IT organizations for improving service management processes and performance. A high level classification of frameworks can be seen in the Figure 8.

External focus | **Internal focus**

Efficiency | Effectiveness | Strategic contribution

SAM

Val IT

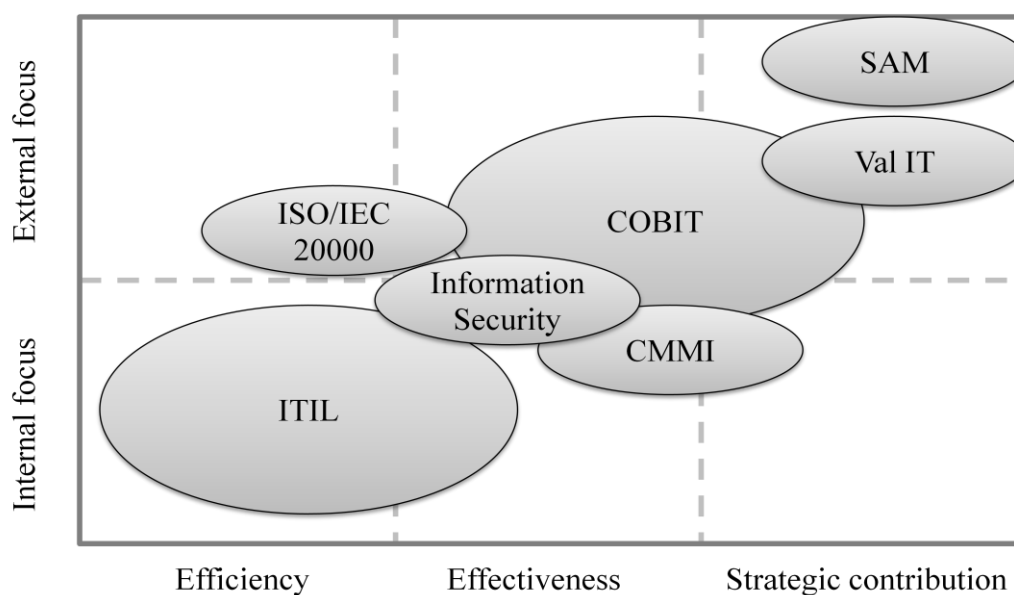ISO/IEC 20000

COBIT

Information Security

CMMI

ITIL

Figure 8. High-level classification of frameworks (modified from Praeg & Spath, 2011)

ITIL, probably the best known of these, is a collection of best practices implemented in the industry. It is a process reference model, and views operations as a collection of different processes by giving a detailed description of how to organize and handle central IT operations tasks such as incidents, problems, changes, configuration, availability, and capacity. Although IT departments around the world have improved their operations based on the ITIL process reference model, there is only a little academic literature examining the characteristics of ITIL. (Cater-Steel, 2009)

A part of the service management is measuring the service levels. The preferences may vary between customers but it should be remembered that the areas that are measured are more likely to get focus and improvement. Focusing only on customer service may lead to an improvement in that area but it also may reduce the quality in other areas. This is why it is important to measure the right things. (Senft & Gallegos, 2009) According to the Gartner Group (2004) it is also important to have different internal and external measures because these measures value different sides of the process. Internal measures keep the organization focused on what they need to do to achieve the promised service levels. External measures should be focused on things the customer cares about, since this is often what the customer sees in the service report. Because internal IT functions and processes impact customer services in different ways, it is important to align the internal measures to the external customer services. (Senft & Gallegos, 2009)

The measuring of IT services should be coordinated with IT process improvement and governance metrics because measuring too many processes can create an overload. According to Senft & Gallegos (2009) leveraging the same information for multiple purposes is much more efficient. Once the measurements have been decided, the source of the information has to be identified. The source should be reliable and consistent in order to make sure that the measurement can be delivered. The rules around measurement

must also be decided and accepted by both the client and the provider. What is measured will depend on the services provided and the agreed quality level. It is important to keep any measurement method simple as the costs may rise too high if the measurements are too much in detail. It is not cost effective to measure every application in an organization; therefore, it makes more sense to measure selected key applications. However, measurement must vary enough to help identify the root cause of problems. The challenge with quality metrics is that there are many factors that go into a quality system that may not be within the control. It is important to track the underlying cause of issues to be able to identify the root cause and attribute only those problems associated with IT against the service level agreement. (Senft & Gallegos, 2009)

There are several tools that can be used in implementing service management processes in organizations. These tools are needed to capture performance and usage metrics from the various platforms and tools consolidate and report on all of this information. These metrics may include peak consumption, capacity allocation, end to end availability and average consumption. Automation of measurement is required to deliver an efficient reporting process. Many of the performance management tools can also be used to measure service delivery. Table 3 provides a sample of these tools. (Senft & Gallegos, 2009)

Table 3. Service management tools (Senft & Gallegos, 2009)

Supplier	Features
BMC Software	Service management portfolio for service desk: incident, problem, change, asset, and service-level management.
Computer Associates	Service catalog, metric analysis, service accounting, service desk, and asset management.
Compuware	SLA reporting, metrics, monitoring.
Digital Fuel Technologies	Manages the entire life cycle of an SLA, service performance, compliance with SLAs, and exposure to financial credits
HP	IT service, asset, identity, and access management.
IBM	Asset management, service management, process management, service delivery, and support.
Indicative Software	Network, systems, and service management software.

InfoVista	Analytics and reporting for networks, servers, and IP telephone.
Lucent	Integrated network management tools, performance management, reporting, and monitoring.
NetScout	Network and application performance management, network troubleshooting, and capacity planning.
ProactiveNet	Performance data, service statistics, problem identification.

Usage of service management tools may improve the quality of service reporting. They also minimize the possibility for human errors, since the tools are heavily automated. (Senft & Gallegos, 2009) The possibilities that these systems provide are analyzed in the following subchapter.

3.3. Reporting in IT service business as a part of management control

Maintaining good relationships is important when dealing with IT outsourcing. From a customer's point of view it is extremely important to know what the supplier is doing and what are the results of outsourcing. In order to make decisions to improve performance a company needs information about the ongoing situation within processes. (Senft & Gallegos, 2009) This is when reporting comes to place: unless there are documents or reports of certain actions or service levels, it is very difficult to evaluate the overall performance. This is why efficient and reliable reporting can be seen as a cornerstone when building a successful vendor-client relationship. (Epstein, 2008)

Even though IT environment and its reporting systems have changed a lot since the birth of the business, some guidelines can be seen as evergreen. Already in 1976, Hardy & Hubbard (1976) presented guidelines for reporting that are usable even today's rapidly moving business world. The following lists these elements. (Hardy & Hubbard, 1976)

- Reports should be relevant to user needs and responsibilities. Every effort should be made to report in a clear way. Reports should include material that is relevant to the area of responsibility.
- Reports should be on a personal level. In other words they should compare results achieved in a responsibility area against that area's plan or standard instead of comparing one area's results against another area's results.
- Reports should include supportive comments. They may include comments both on positive performance and on areas which need improvement. Individual per-

formance is often better when reports include comments that reinforce and give direction.

- Reports should be consistent. Changes can be made but only for good reasons and the changes should be explained to users or customers.
- Reports should be timely and regular. In general, the closer to the event the report is made, the more useful it will be. This means for example reporting on a monthly basis.

Planning and reporting are a part of an organization's ongoing operations and decision-making. Reporting is done to help promote a continuous improvement feedback cycle where reports provide important information to allow the best possible decision-making in the next planning cycle. In other words, reporting should influence future planning and resource allocation. In a performance reporting model, planning and reporting can be seen as two ends of the same process. (TBS, 2008) According to Kyriazoglou (2010) the most critical assets of the 21st century are not of a physical, financial or of a computer software nature but knowledge and ideas, which are stored in computerized systems in the modern business environment. In order to get this knowledge stored properly companies need certain reporting mechanisms that help to collect the data. This is where successful reporting takes place. Reporting on performance is not an end in itself, but it really is a part of effective management and accountability. (TBS, 2008) The following Figure 9 provides an example of usual reporting.
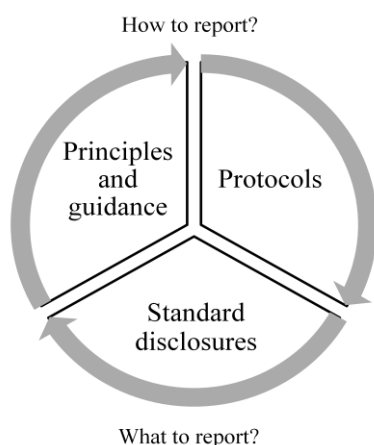
Figure 9. Reporting framework (modified from Epstein 2008)

Kyriazoglou (2010) describes IT reporting as follows: Managing and ensuring that all user problems, such as application errors, data errors, equipment faults, security incidents, human resource issues, vendor problems and governance issues are reported to the higher levels of the organization for subsequent review, resource resolution and effective implementation to the stated problems. The main objective of any performance measurement and reporting system is to provide feedback relating to the specific objectives of an organization. What is reported depends of the company, but the following lists the usual ones: timely delivery of reports to users, average response time, average

availability time, volume of data stored, mean time between failures, number of lines printed, volume of data maintained, number of shared applications, number of shared databases and number of online transactions processed.

3.3.1. Different types of reporting

The actual reporting can be divided into internal and external one. The internal reporting is the processes that are made within the company to get an overall picture of the ongoing situation. Often this leads to external reporting that covers reporting to the customer. Even though the external reporting is what the customer finally gets and appreciates, the development of systems focused on internal managerial decisions is even more critical for improving sustainability performance. Internal reporting provides important feedback for effective decision making and helps employees to see how they affect the performance of the company. The content and placement, distribution and communication of internal reports are important factors in obtaining information for effective decision making. (Epstein, 2008) Figure 10 presents the most important internal and external audiences for corporate disclosures.
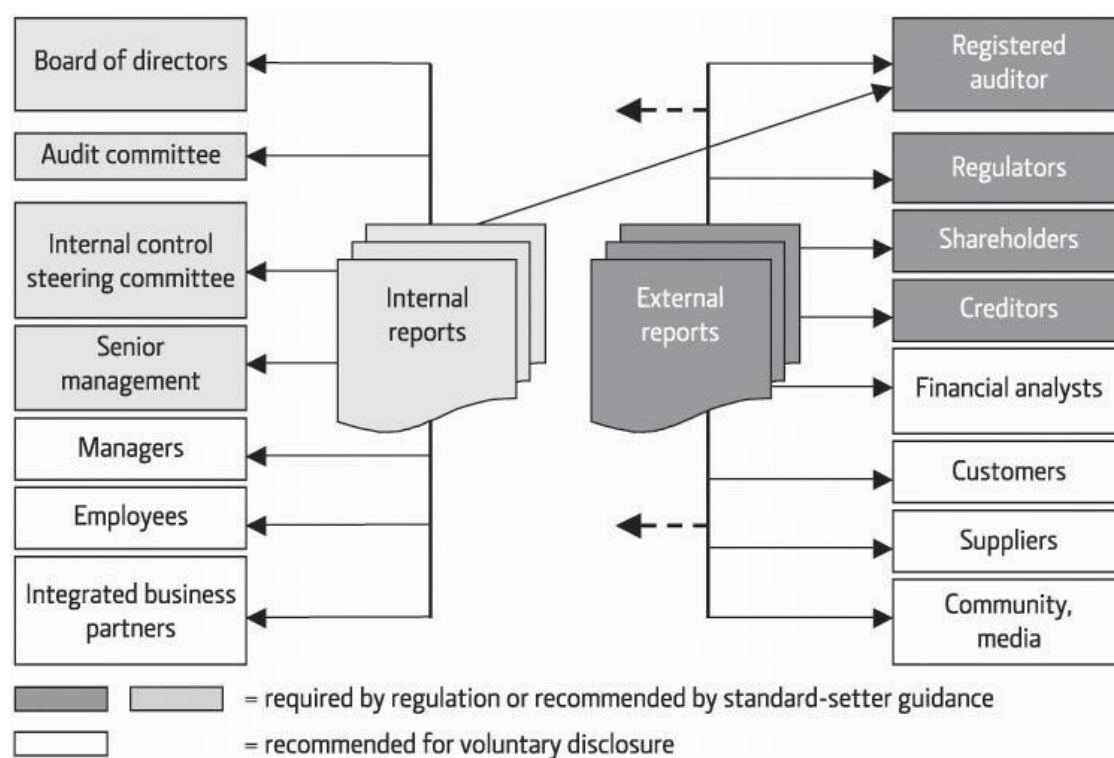
Figure 10. Internal and external reporting (Epstein, 2008)

As the figure shows, internal and external audiences can be divided into two subgroups. Some audiences must be informed about sustainability outputs and outcomes because of regulation or recommendations in standard-setter guidance. Voluntary disclosure to other internal audiences and external stakeholders is recommended because of anticipated benefits for improved decision-making. (Epstein, 2008)

Although internal reports are aimed exclusively at internal audiences, there may also be interested internal audiences for some areas of external reporting, such as corporate annual reports and sustainability reports. (Epstein, 2008) According to Calvasina & Gray (1995) internal reports often have no underlying plan, reason, or rationale, but as Epstein (2008) stated, the internal reports often lead to external reports and therefore can be seen even more important than external ones: without effective internal reporting related to sustainability, business unit and functional managers cannot make optimal strategic and tactical decisions, evaluate the payoffs of specific management initiatives, or make new capital project decisions. (Epstein, 2008)

The distribution of internal reports can be done in various ways: (Epstein, 2008)

- Broadcast emails, email discussion groups, or conference calls
- Corporate newsletters, letters from the CEO, or newsletters from the senior sustainability manager
- Databases supporting specific sustainability issues
- Intranet sites capturing information on sustainability management for easy access by personnel
- Messages integrated into ongoing corporate communications
- Posters or signs reinforcing key aspects of sustainability strategy

For an IT organization to provide the outcomes desired by its customers, it must align its products and services to the business. The ultimate measure of the success and viability of any IT organization is the ability to optimally align to customer needs and to meet customer's expectations. (Ryan & Raducha-Grace, 2010) In addition to the high quality performance, companies need to present excellent reports that validate the outcome. An IT company or a department has its own characteristics and so does its reporting system. In addition to the corporate procedures on management reporting, the IT department may report to upper levels of management the IT-related performance issues. These reports usually contain: (Kyriazoglou, 2010)

- Changes, problems, errors, security incidents and backlog of requests
- Help desk related issues
- Online access issues
- Technical performance issues
- Back-up and recovery issues
- Transactions and jobs processed
- Development issues of new applications
- IT project milestones
- Project actual costs
- Post-implementation review issues
- Critical performance measures per IT area

- Compliance issues
- Industry trends and developments.

Thompson et al. (2007) conducted a two phase study that provided information for the linkage between reporting quality and performance. In the first phase team members were asked to provide information about their reporting as report senders. In the second phase they used a complementary perspective, where project managers were asked to provide an assessment of the reports that they received from their teams as report receivers. In both studies, the reporting quality measures stated that reporting quality will be positively related to IT project performance and moreover to its task, psychological and also organizational outcomes. Even though the study was especially about IT projects, it is not too brave to assume that the same goes with IT services. Based on the observations, it was seen that quality can be achieved by building a strong linkage between team members and managers. This specific link is especially important since team members are usually the source of the information whereas the manager collects the data and makes the everyday decisions about activities. Managers who receive reliable status reports from their team are better equipped to allocate resources efficiently and initiate appropriate corrective actions as needed. As Jiang et al. (2004) found out, accurate status updates allow managers to organize their project more effectively, and this is often self-reinforcing; projects that enjoy high quality communications tend to be well-managed and organized and thus be less likely to fail.

3.3.2. Reporting methods and systems

One of the simplest and most useful reporting methods is known as traffic light reporting, where the status of a certain service is reported as green, yellow or red. According to Snow & Keil (2002) traffic light reporting is a documented method for project management and control that provides a simple and intuitive way of communicating project status by discussing issues of error and bias in status reporting. This system can be easily criticized because of its subjective characteristics: evaluating the status of the project is complicated and involves subjective judgment, which means that human assumptions and social pressures affect the accuracy of reports. (Thompson et al., 2007) For example, a project may be in the red state, but the project manager may find it to be in a yellow or green state. This can also be done in purpose when project manager's reporting is biased. For example, the project manager may perceive the project to be in a yellow state but may report it as in a green state. According to Snow & Keil (2002) especially software project managers make significant errors in assessing status and perceive status to be more optimistic than reality.

The service management tools that were presented in the Table 3 can also be seen as reporting systems, since these applications produce data that can be used in the reports. For example BMC Software has an application called Information Technology Service Management (ITSM), which prints reports for service desk about incidents, problems,

changes and assets in the services. The ITSM report usually includes the amount of tickets, the percentages of the targeted service levels, ticket classification by type and raised problem tickets. (Senft & Gallegos, 2009) In addition the monthly report can include availability reports, such as System Center Operations Manager (SCOM) reports, which tell the availability of certain servers in the selected period of time. (Microsoft, 2011)

Besides mechanical reporting, which is done by collecting data from certain places and combining them into a single report, automatic reporting can be used. One reason to use automatic reporting instead of mechanical data gathering is that a firm wants to automate reporting process to improve straight-through processing rates and improve operational efficiency. Using the automated reporting also reduces the possibility for human mistakes. However, mechanical reporting can be little less complicated since it does not require expensive reporting tools or configuring the system with company's data warehouses. An IT company has several different software programs that have their own needs for reporting. One may need a certain kind of reporting tool whereas the other one needs a totally different tool. When combining all the expenses together, the total cost of automatic reporting can rise higher than expected and accepted. Also the data the automatic reporting tools provide can vary between the systems, which means that the final report has to be done mechanically anyway. (Dresdner 2004) According to Thompson et al. (2007) one approach is to use multiple sources for status information and to make sure that the sources represent different populations. On one hand this could decrease but on the other hand it could increase the problems that the different reporting methods may cause. Choosing between these two standard methods may therefore be complicated.

3.3.3. Challenges with reporting

There are a few reasons why internal reports are often seen as a problem. One explanation is the lack of focus on internal reporting. Deficiencies and inadequacies in reports often result in users losing confidence in the whole process. Improper presentation may render information inaccessible or discourage its proper and effective use. Deficiencies that can cause user frustration are too complex and irrelevant measurements, lack of responsibility and insufficient detail, just to name a few. The willingness to report also varies between different situations and business related relationships. (Calvasina & Gray, 1995) Snow & Keil (2002) stated that project and service managers - who are responsible for reporting - may not faithfully report what they believe when recognizing that their status perceptions might be wrong. Their study, which was based on an uncomplicated model and five interviews, showed that in many cases, the problems associated with difficult projects begin with inaccurate status reporting. According to their assumptions many projects would be cancelled or redirected if senior managers would know the actual status of a process. Inaccurate status reporting can therefore lead to a

situation where troubled projects are continued instead of being terminated or redirected.

On the other hand study made by Park et al. (2008) showed that people are much more willing to report bad news when fault responsibility can be placed on an external vendor. The same goes with the assessing the negative reporting, which should be reported. Without having an external vendor to blame, employees may be reluctant to report bad news because they fear being held responsible for having caused the problem. As another study shows (Park et al., 2009) keeping the information and not sharing it may cause problems also to the others within the project or service. In the worst case the problem goes all the way to the customer, who may receive financial damages because of bad reporting. Researchers of Infrastructure Services (IS) project communications have stated repeatedly that misreporting tends to have a negative impact on project task outcome, especially on efficiency in terms of budget and schedule overruns. (Heng et al., 2003) According to Thompson et al. (2007) it is also likely to lead to misunderstanding and mismanagement.

Reporting quality refers to the degree that the IS status reports give a complete and accurate representation of the project's state. According to Thompson et al. (2007) the generation and transmission of reliable status updates can be a challenging task for three reasons: Firstly, IT development is a social effort involving developing intangible assets and interaction with professionals. On the other hand evaluating the status of the project is complicated and involves subjective judgment. Secondly, it is almost impossible for reporters to obtain and transmit a complete and accurate picture of a project or service because of the natural cognitive and processing limitations. And thirdly human assumptions and social pressures affect the accuracy of reports: deliberate distortion of status information by the reporting employees can occur by changing or withholding of relevant information.

3.3.4. Good reporting guidelines

Pravin Shah, an Indian management consultant, said, "Without a yardstick, there is no measurement. And without measurement, there is no control." A company and especially its managers should develop a reporting system that captures this performance information. These reports should be detailed for the operating meetings and summarized for the oversight council meetings. (Greaver, 1999) As Charalambos (2009) stated, quality of reporting is a good evaluation tool for project success and reporting quality can be influenced significantly by optimistic biasing.

To maintain good service level, internal reports must be easy to read and understand. Even though it is not always possible to make a report user friendly it is definitely something to strive for. At a minimum, a successful report should allow the user to find information without pro, tracted analysis, recompilation, or recalculation. Complex re-

ports should have a written discussion and analysis to make them easier to use. Knowing what is being evaluated and the types of evaluation are important. There should be no ambiguity or uncertainty about the time period covered by the report. (Calvasina & Gray, 1995) According to Snow & Keil (2002) decreasing the amount of error results in little marginal improvement in reporting accuracy. If the goal is accurate reporting, minimizing bias is more important than minimizing project manager misperceptions regarding status. Moreover, attention needs to be placed on the effect that bias has on reported status.

There are some best practices about monitoring and controlling that relate strongly on reporting. Greaver (1999) made a ten step process that leads to successful outcome and reporting has a vital role in this. Implementing this plan will require the functioning of three contributing elements: the IT management reporting procedure with the IT management report, the performance measures in each IT area, and the audit review tools and techniques. The first action after you set up the basic organizational elements of an IT function is to ensure that all IT controls are monitored and reviewed by a disciplined method: (Kyriazoglou, 2010)

- Step 1: Set up an IT performance team
- Step 2: Evaluate IT performance reporting needs and decide which IT performance data and compliance measures will be monitored and collected
- Step 3: Create the IT performance reporting system.
- Step 4: Design IT management report and obtain senior management approval
- Step 5: Train all staff attending the IT performance reporting process
- Step 6: Collect the data
- Step 7: Review IT performance and compliance data with relevant officers
- Step 8: Prepare IT management report
- Step 9: Issue IT management report to all approved levels
- Step 10: Monitor and improve the system

Also Greaver (1999) studied reporting and found guidelines that should be considered when reporting. The typical historical performance analysis should be designed to report the actual performance, the performance standard, and the variance from standard. It should show the current period and the year-to-date cumulative information. The provider should also produce the performance reports as information becomes available. This can be done for instance hourly, daily, weekly, or monthly. In certain cases, the organization may share in the performance measurement and reporting. In particular, the relationship team should routinely survey the internal customers to determine if they are satisfied with the service. This information should be shared so the provider gets fast, appropriate feedback on their service.

The reports should be distributed, promptly reviewed by the relationship manager and the account manager for problems and followed by necessary actions. If routine reports

have routine results, they can be reviewed in the weekly operating meeting or monthly performance review meeting, and appropriate action can be taken then. This feedback signals to the provider that the organization is engaged and should stimulate their excellent performance. Monitoring should also include a review of the provider's progress against certain longer-term agreed-upon objectives. The content of internal reports should include: (Greaver, 1999)

Setting and reporting on targets. Previous plans and goals should be disclosed with the sustainability outputs, to permit comparisons between actual achievements and planned results. The internal report's ability to look across the organization will allow internal users to identify sustainability outputs in the aggregate, and determine gaps in the sustainability management strategy.

Demonstrating accountabilities and make recommendations. Showing where accountability lies may be specifically important for those who have responsibility for oversight, or are responsible for decision-making. Accountability can be shown through a discussion of corporate governance and structure. Sustainability reports must also include recommendations for the intended internal audiences.

Including different types of data. Different aspects of sustainability performance and decisions call for different types of data: qualitative or quantitative, different metrics, and other tools. Graphs and other figures are specifically useful. However, the report must include sufficient relevant technical detail needed by those responsible for taking action.

Including metrics. Sustainability reports should explain presented metrics in sufficient detail. In periodic reports, metrics must be disclosed consistently from period to period; to the extent they are still relevant.

Explaining context. The context of reported impacts must be appropriately explained in order to make sure that the final audience understands what is measured and delivered.

In conclusion even though the target groups of internal and external reporting differ, there is a strong link between these two. Internal reports often lead to external reports and external reports are often the reason for making internal reports. The reporting methods and tools vary between the services, but the general idea is to provide data that is easily readable and provides relevant information about the measured service. The challenges with reporting are usually connected to the human factors, such as reluctance to report bad news and subjective evaluation. As the chapter 3.3.4 stated, the good reporting guidelines are very basic: measuring the right things and having the correct data.

3.4.   Developing the process for internal reporting

In order to achieve customer satisfaction, it is vital to identify the key processes that lead to this satisfaction and then target improvements to these processes. Even if it seems that a service is doing fine or performing badly it cannot be evaluated unless there are documents that show the actual service levels. Business process re-engineering identifies and improves the key business processes. While different approaches can be followed, they usually include steps such as these: (Bowhill 2008)

Identifying key processes. In order to know what to develop, the company has to identify its key processes and select the ones that need the improvement. These processes can be for example sales processes, service delivery processes, implementation processes or in this case internal reporting processes. The focus has to chosen carefully, so that the scope does not grow too big. (Bowhill 2008)

Analyzing the current process. When done carefully, analyzing the selected process shows the detailed situation of the process in hand. Different tools or methods are used based on the selected process and its characteristics. The analysis raises topics to the table and shows which parts of the process are working properly and which might cause problems now or in the future. (Bowhill 2008)

Redesigning the process and measurements. Redesigning the process and its measurements is done step by step with extra care. The changes made in this phase have the biggest impact in the future and will ultimately show whether the whole development was successful or not. Changing the process and its measuring goes hand in hand, since they have a strong correlation to each other. (Bowhill 2008)

Implementing the improved process. In addition to being well planned the change, has to be implemented in way that does not harm the ongoing services or disturb the employees. (Ryan & Raducha-Grace, 2010) This means taking it step by step and making sure that the change does not come too quickly. (Bowhill, 2008) A study by IBM (2008; according to Ryan & Raducha-Grace, 2010) explored differences in how change was implemented by more than 1,500 practitioners worldwide in organizations of varying size and cultures. One of the key findings of this comprehensive study was that only 41 % of change initiatives in organizations were considered successful. (Ryan & Raducha-Grace, 2010)

According to the same study cultural change is difficult to achieve and it requires a structured, measurable approach to transform organizational culture. There are a number of approaches to organizational change and the most significant challenges when implementing change projects are often people oriented. (Ryan & Raducha-Grace, 2010) The following Figure 11 shows some of the key barriers to successful change.
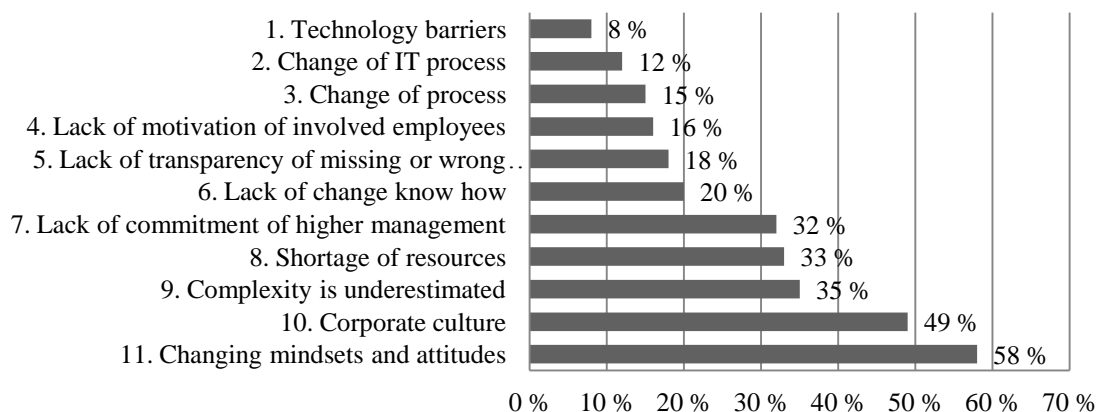
Figure 11. Barriers to change (modified from Ryan & Raducha-Grace, 2010)

These findings demonstrate that the nontechnical factors have a bigger impact than technical ones, even when making changes inside an IT organization. This study showed that more than half of the interviewees saw that changing minds and attitudes is a barrier for change. It is also suggested (Park et al., 2008) that willingness to report bad news may be influenced by psychological features of personality such as morality than behavioral features of personality such as willingness to communicate. And what are the factors that must be present for successful change and new internal reporting implementation? According to the IBM study (2008; according to Ryan & Raducha-Grace, 2010) the factors shown in Figure 12 are critical for making change successful.
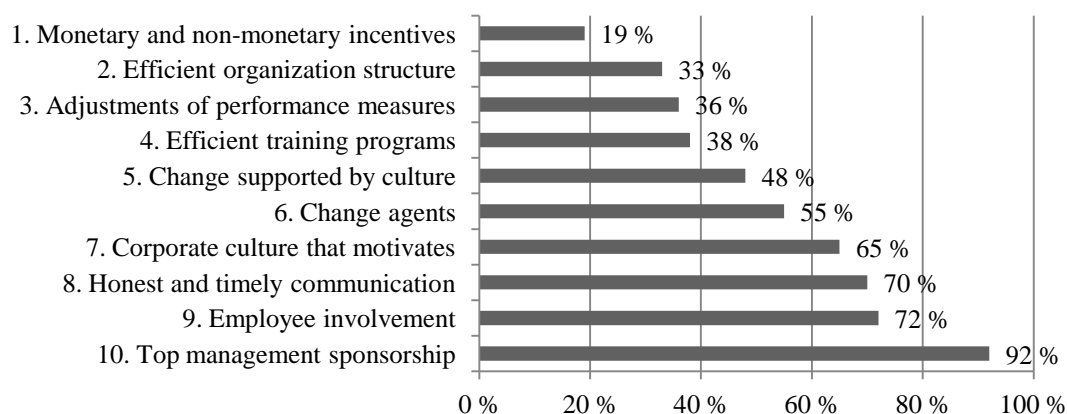
Figure 12. Enablers of change (modified from Ryan & Raducha-Grace, 2010)

The most frequent reasons for failure are soft factors, such as bad commitment of top management and low level of employee involvement. Especially the top management is in a big role in this because their actions often signal to other members of the organization the important activities to support. (Ryan & Raducha-Grace, 2010) The executives should establish communication environments that are likely to nurture open, complete reporting. In addition to creating an environment in which high quality reporting is more likely, the management can also take steps to spot the occasional misreporting that does

occur. (Thompson et al., 2007) Employees will not engage in change initiatives unless there is clear, consistent communication from the leadership of their organization. In other words: what is needed is the need for change, the commitment to change and the change process that involves all levels of employees. (Ryan & Raducha-Grace, 2010)

Using this framework for internal reporting process development may demand some adjustments, but basically the idea of redesigning a process stays the same. Identifying the key processes, analyzing the current ones, redesigning the process and its measurements and implementing the plan are steps that could be used for several industries. As Ryan and Raducha-Grace (2010) stated, the barriers to change as well as enablers of change are also usable in the IT business. When evaluating the final effects in the IT environment its own characteristics have to be taken into account.

3.5. Conducting the literature review

The literature review was conducted by using several different documentation types. The theory was mostly based on books that had been written in the 21st century or at the end of the 20th. These books gave the overall picture of the models and theories behind outsourcing, IT service procedures and reporting. Even though the perspective for this study was focused on the IT business, there were several books that included only general information about outsourcing or services. This provided a better understanding of the whole business and the reasons behind it. The extensive information was fulfilled with the updated information that was found in articles in scientific journals. The most common search words were: IT services/reporting/consulting, internal reporting/monitoring, reporting practices/methods and any combinations of these words. The selected articles got deeper into the actual research object, internal reporting, and they also provided some up-to-date figures and fresh ideas that could be used in the conclusion chapter. A wide range of authors were cited in order to get interesting conversation between the sources. Besides these two main literature sources, also other sources such as Internet articles were used as a reference.

The study followed the basic rules for text analysis: reading through the text, understanding the context, finding the relevant information and using the correct reference methods. The amount of possible information was overwhelming, which made the ultimate selection more difficult, but also provided a chance to choose the sources that suited the best. The articles and authors were selected by using a snowball effect: when an interesting and informing article was found it often provided a list of references that included other interesting articles. Even though literature played an important part in the research and especially in the theory part, it did not give any empirical information that was needed in order to make justified proposals.

The literature review presented the ultimate structure that can be used when making the final suggestions. It started with the overlook into the IT outsourcing business, which is

extremely relevant when thinking about the limitations. The analysis of benefits and problems showed the reasons for outsourcing and also the unexpected challenges/costs that should be taken into account. This was followed by the overview of the IT service world and its characteristics, especially when delivering quality services. The quality management tools and frameworks were presented, which can be helpful when comparing these to the ones that Capgemini Finland uses. Ultimately, the reporting methods, tools and guidelines showed the theoretical structure of quality reporting. This again can be compared to the answers that will be got from the interviews. Since all this has to be taken into practice, also implementation methods were presented.

As the literature review showed, the IT business has its own characteristics; focus on the cost savings, professionalism and the trend towards low cost countries. When making the suggestions especially the costs of implementation has to be taken into account and calculated carefully, since as a study (Solli-Saether & Gottschalk, 2010) showed, the hidden costs often represent a major part of the total costs. The benefits that the companies are likely to get were quite obvious, but also usable when justifying the proposal. Seeing the positioning in the IT management frameworks will guide the research into right direction, which most probably is following the current frameworks and their limitations. When choosing the tools and methods for the new reporting it is important to see the benefits and differences between these. When thinking about the internal reports and their relevance for the company, it is important to see that they are also the cornerstone for the external reporting and therefore valuable for quality services. What the literature review did not tell was that how to improve the reporting process in practice: which tasks can be reduced, what should be improved and how will the possible changes work in practice? The answers to these questions will be gotten through the interviews.

4. CAPGEMINI FINLAND

Capgemini Finland is a part of Capgemini Group, one of the largest IT consulting companies in the business. The mother company operates in 40 different countries in Europe, North and South America, the Asia Pacific region its revenue being 8.7 billion Euros in 2010 and the number of employees approximately 110,000. Capgemini is independent from any software publisher or hardware manufacturer and has formed a network of strategic alliances and partnerships. The company has partnerships with the world's top technology companies like Oracle, Microsoft, IBM, SAP, HP, SUN, Intel, Cisco, Dell, EMC and Teradata. (Capgemini Finland, 2011)

4.1. Offering

Capgemini Finland's portfolio consists of three main service lines: consulting, technology and outsourcing services as follows in the Figure 13. (Capgemini Finland, 2011)
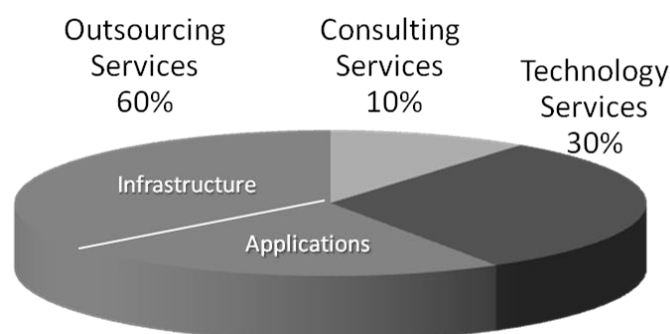

Figure 13. Capgemini Finland's Portfolio (Capgemini Finland, 2011)

Consulting services include customer relationship management, finance & employee transformation, supply chain services and strategy & transformation consulting. The goal of the consulting services is to help customers to develop their business performance and improve competitiveness in a rapidly changing business environment. The technology services include package implementation, customized solutions, case management solutions, E-business solutions and business intelligence/ data warehouse – solutions. This research has the focus on the third sector, outsourcing services which can be divided into two main groups and further on to several sub groups: application outsourcing, including application management, application development, application hosting and application testing; and infrastructure outsourcing, including data center & infrastructure services, network services, workplace services, security services and infrastructure transformation. This sector covers approximately 60% of Capgemini Fin-

land's total revenue and despite the ongoing recession, it has been growing steadily during the last few years. (Capgemini Finland, 2011)

According to Senft & Gallegos (2009) application services typically include maintaining existing applications, making changes and enhancements to existing applications, and building new applications. In Capgemini's case Application Management (AM) Service Desk is responsible for the AM side of Capgemini and acts as a single point of contact for the clients and takes care of requests. The tasks include receiving and raising an incident ticket, solving and escalating it, communicating the outcomes and following-up the results. Besides incident tickets there are also service requests that need to be handled. The difference between these two is that incident tickets imply of a small problem in the IT services whereas the service requests are more like configurations that have to be made. (Capgemini Finland, 2011)

Capgemini's Service Desk (SD) has employees specialized in taking care of requests and customer communication. They form an interface between client and resolving teams – both Capgemini and 3rd parties. SD has also knowledge and skills in client business and customized applications doing a lot of business supporting problem solving and manual checks. SD gets requests from automated monitoring, users, service delivery managers and 3rd parties. It receives a request, analyses it and raises a ticket to selected incident management applications. They also fix big part of requests themselves, but part of them they escalate to resolving teams to be fixed. (Capgemini Finland, 2011)

Capgemini Finland delivers also a wide range of Infrastructure Management (IM) services and is able to scale in hardware and functional areas. Usually Infrastructure Services (IS) include building and maintaining operating platforms. (Senft & Gallegos, 2009). Capgemini's wide IM resource base in Finland in addition to India's resource pool is a great combination when delivering such services. ITIL based processes and CMMI certificate ensure the quality of services. The company aims to cut costs by using the offshore, in Capgemini's terms Rightshore, possibilities in India and other low cost countries. IM services can be divided into six different parts that support each other: Desktop and Distributed Services, Network Infrastructure Services, Datacenter Services, Monitoring/Command Center, Service Desk and Service Management. (Capgemini Finland, 2011) IM service portfolio can be seen in the following Figure 14.
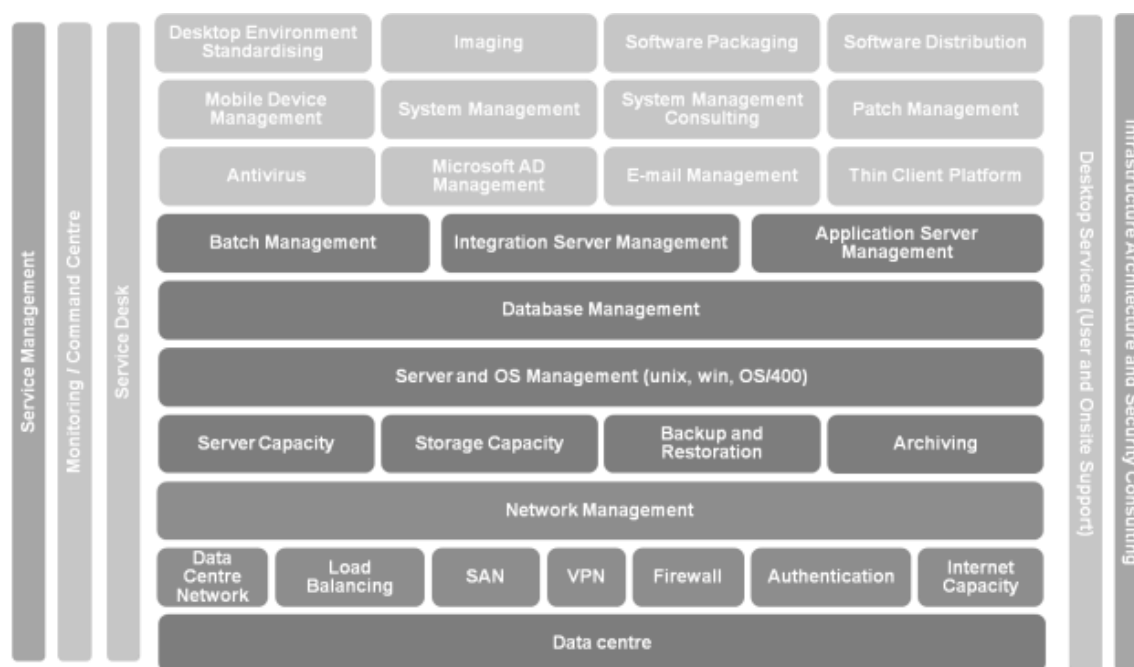
Figure 14. IM service portfolio (Capgemini Finland, 2011)

Capgemini Finland has numerous different clients with several variable contracts, but often the customers are large companies with businesses all over the Finland and abroad. The main industries where Capgemini Finland operates are: commercial sector and supply chains; IT, media and entertainment; public sector; banking, insurance and financial services; and manufacturing and energy industries. (Capgemini Finland, 2011) This research concentrates mainly on the commercial sector, because this was in the interests of the company. The selected client also provides a good overlook of the business because of the many services that they are offered. The problem with the public companies is that they are not very eager to publish data for external researches. More of this and the outcomes will be analyzed in the chapter 5.

4.2.   Business environment

Like other major businesses also IT is facing a growing pressure for price reductions. As the customers become more aware of the actual cost of IT they demand lower prices with the equal or even better quality. This forces the IT companies to find solutions outside the traditional areas, such as Europe and USA. (ITAA, 2003) An Information Technology Association of America (ITAA, 2003) survey found that 12 % of IT companies had outsourcing operations overseas. Most foreign outsourcing from the US is conducted by large IT companies and programming and software engineering positions are the ones most likely to be outsourced. Nowadays the outsourcing companies are moving their practices more and more to the low-cost countries, such as India, Philippines and Poland. This phenomenon can be compared to the 1980s, when blue-collar workers in the US began to see jobs shift to locations in Mexico and South Korea. (Cohen and Zaidi, 2002)

Besides Capgemini, large IT companies in 2006 that had more than 15 percent of their global employees in India included Accenture, Oracle, EDS, and IBM, just to name a few. (Contractor et al., 2011) In the beginning of the millennium Forrester Research (McCarthy et al., 2002) estimated that only in the US approximately 400,000 IT-related jobs would be relocated abroad over the next fifteen years with the greatest outsourcing expected in software development, customer service, and call centers. This estimate was revised upward in 2004 due to a strong development in the demand. (Mears, 2004). Capgemini Finland, as well as the mother company Capgemini, has a large offshore office in India that takes care of the most common IT tasks that can be done abroad. Even though the clients are in Finland or elsewhere in Europe these tasks can be delivered with high quality due to efficient cooperation and professionalism. When the services are delivered from India, the customer gets the same value but with lower costs due to the cheaper employee costs in India. Capgemini Finland has a strong intention to improve the internationalism within the company and it encourages its employees to work with the Indian colleagues. And as offshore skills and capabilities mature and expand, more innovative solutions can be delivered from these offshore locations. The following lists the main advantages of using offshore services: (Capgemini, 2011)

- Cost reductions: Saving up to 40% on IT costs compared to the traditional IT services
- Streamlined processes: Improving productivity and reducing operating costs by implementing agile and efficient processes
- Innovation: Focus on innovating and transforming the business
- Competitive advantage: Staying ahead with solutions that employ the latest technology to improve quality in delivery
- Growth: Implementing solutions, which increase productivity and help expanding the business

4.3. Quality system

According to Praeg & Spath (2011) the organizations should use several quality frameworks in parallel. This has also been noticed in Capgemini Finland, which uses 2 different systems, ITIL and CMMI. Capgemini Finland got the ISO-certificate in 1991, being the first IT company to receive it in Finland. One of the biggest changes in the company's quality systems was moving the national procedures to Nordic Quality System (NQS) in 2000. In 2006 Capgemini Finland decided to develop a whole new system, which was a combination of Capability Maturity Model Integration (CMMI) and Information Technology Infrastructure Library (ITIL), both of these systems being well-known standards in the business. Capgemini Finland was able to reach the maturity level 3 in CMMI in 2008, which was also the year when NQS was replaced. CMMI level has been evaluated and given by Software Engineering Institute, whereas the other certification, ISO 9001:2008 has been given by Det Norske Veritas. Since the ITIL certifi-

cates are individual, the Capgemini employees can apply for these certifications if they are relevant for the exact roles inside the company. (Capgemini Finland QM, 2011)

According to Praeg & Spath (2011) there are three main reasons to use several frameworks at the same time. The first reason is the growth of the field of potential application of each model. A second reason is the tighter integration of business units or different departments within IT. In other words it may result in better integration between IT operations and system development. The third motivation for multi-model environments is related to the second reason. The companies' stakeholders often maintain a preference to the model which is closest to their specific expertise and viewpoints. For example systems engineers typically prefer to work with CMMI whereas IT operations may stick to ITIL and the IT auditor most efficiently works with COBIT. The following Figure 15 shows the positioning of different frameworks by their functions and characteristics.
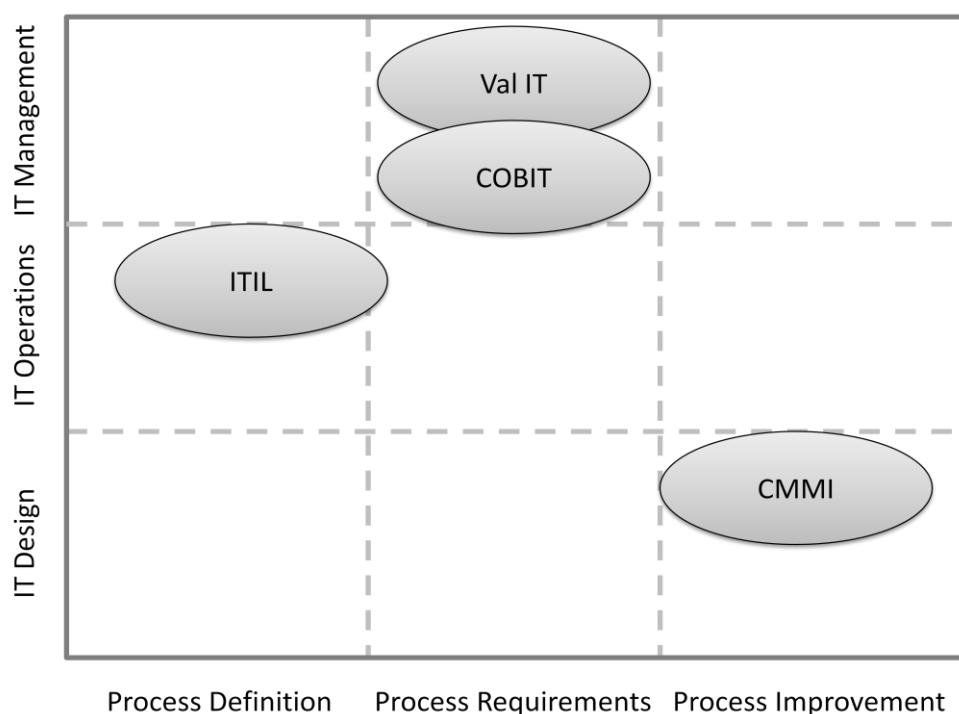
Figure 15. Positioning of frameworks (modified from Praeg & Spath, 2011)

As the figure shows, Capgemini's CMMI is more concentrated to process improvement and IT design whereas ITIL has the focus on process definition and IT operations. This means that Capgemini Finland's Quality Management System (QMS) system covers both services and projects CMMI being the actual cornerstone of the whole QMS. It includes all the relevant elements of efficient processes and its basic functions and targets are: (Capgemini Finland QM, 2011)

- all processes are well defined and understood within the organization
- assignments are customized for the client

- the defined process describes clearly its needs, inputs, staring criteria, functionality, measuring, verification, outputs and the final criteria
- the integrated assigned team has the common understanding of the assignment's goals

ITIL on the other hand is more concentrated on the services. It is a worldwide tool managing IT services, created by Office of Government Commerce (OGC). Even though used mainly in services it can be used in certain type of projects as well. The official definition of ITIL states:

> "ITIL is the most used approach for IT service management. It includes a comprehensive and logical group of the best practices for IT management by emphasizing the approach to reach the efficiency in IT systems. ITIL provides a shared frame for all the activities that the IT department is supplying. These activities can be divided into processes that will form an efficient frame for IT service management development." (OGC, 2005)

Together with CMMI and ITIL frameworks, Capgemini Finland's QMS covers all the sectors inside the company. The quality system is described in the following Figure 16.
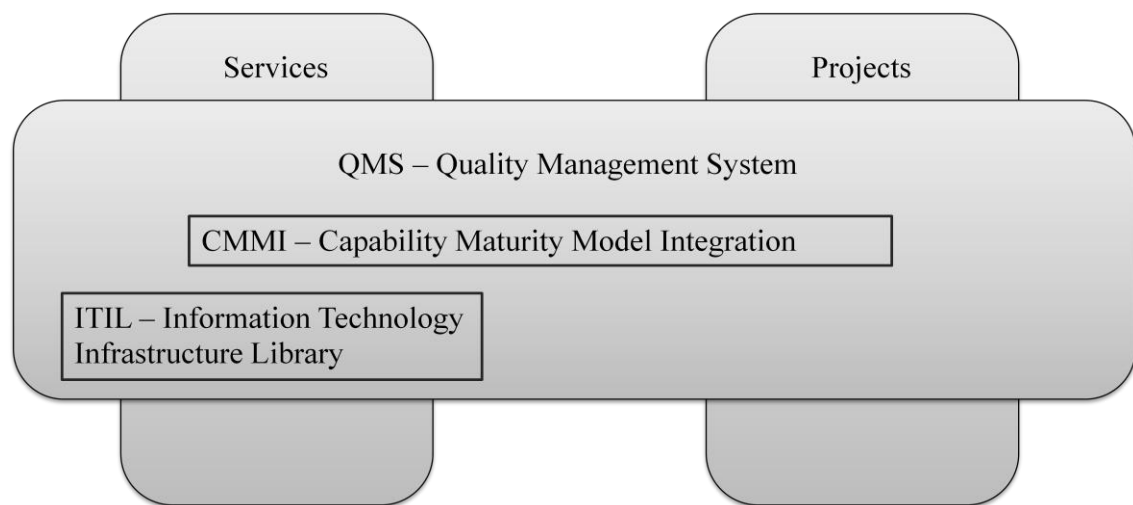
Figure 16. Capgemini Finland's Quality Management System (Capgemini Finland QM, 2011)

The QMS consists of several documents that can be found from the QMS portal. These documents include: Apex documents: describing the quality policy of the company, organizational structure and the responsibilities; Process documents: defining what, when, who, where; Document templates: for all the processes, giving enough information for following the process; Instructions: giving help to follow the processes and tasks; and Check-lists: making sure that the tasks are done the same way every time. (Capgemini Finland QM, 2011)

When it comes to the services, the QMS includes the following processes, described in the Figure 17.

Figure 17. Service processes, QMS (Capgemini Finland QM, 2011)

The quality organization is responsible for quality management and consists of Software Engineering Process Group (SEPG) and Software Quality Advisor (SQA). SEPG is responsible for internal development and SQA supports and monitors the system in projects and services. This is done by making inspections and auditions. All the quality deviations are documented and the correcting is being followed. Quality status and deviations will be reported to the management group. (Capgemini Finland 2011, QM.) The following Figure 18 describes the relevance of the QMS system in Capgemini Finland.
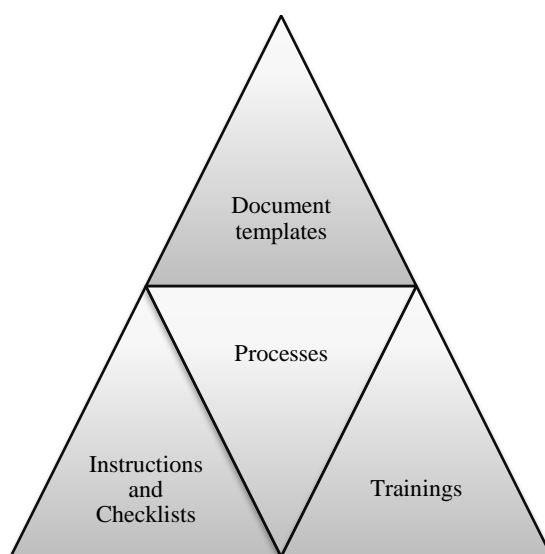
Figure 18. The QMS supports the organization and its processes/services (Capgemini Finland QM, 2011)

The quality organization is responsible for the continuous development and therefore all the deviations are collected and analyzed for further inspection. Different trainings are provided in order to improve the knowledge level of the employees. The quality plan is updated every week and published on the company's intranet. (Capgemini Finland QM, 2011)

According to the quality system, all the clients are provided with a specific quality plan. All the services have a certain Service Delivery Manager (SDM), who is responsible for creating this plan and keeping it up-to-date. SDM is also responsible for reporting the quality of a service in monthly meetings and finding the reasons for possible deviations in a service. The role of the SDM is to act as an intermediary between the client and the supplying company. This includes service management, delivery management and development management. In order to get the most out of the customership, the SDM makes development suggestions that are reviewed in the monthly meetings. Employees in the production work actively with the SDM and give their opinions for consideration, but the client is always the one who decides whether the suggestions will be taken into action or not. (Capgemini Finland QM, 2011) How this works in practice, especially when it comes to service reporting, is described in the following chapter.

5. RESULTS: CURRENT STATE OF SERVICE REPORTING

In this chapter the current state of service reporting in Capgemini Finland is introduced. This analysis is based on the selected research methods that included interviewing, process modeling, documentation analysis and observing. As was stated in the chapter 2, the interviewing phase played the biggest role, whereas the observing and documentation analysis were given less focus.

Even though extremely important, service reporting can be seen as only a part of Capgemini Finland's Service Delivery process. The whole service reporting is a phase of the ongoing tasks that need to be done when providing services. The purpose of the whole process is to define the process required to plan, record, finalize, monitor and report Service Levels and it is applicable to all service within the company. In Capgemini service reporting consists of 5 different elements: periodic service reports for clients, internal service reporting, internal steering group meetings, senior manager reviews and service stocktaking. This means that these five elements together form a link in the Service Delivery chain, but what is being evaluated is the actual reporting and especially internal service reporting. (Capgemini Finland, 2011) The following Figure 19 shows the positioning of the service reporting in the process.
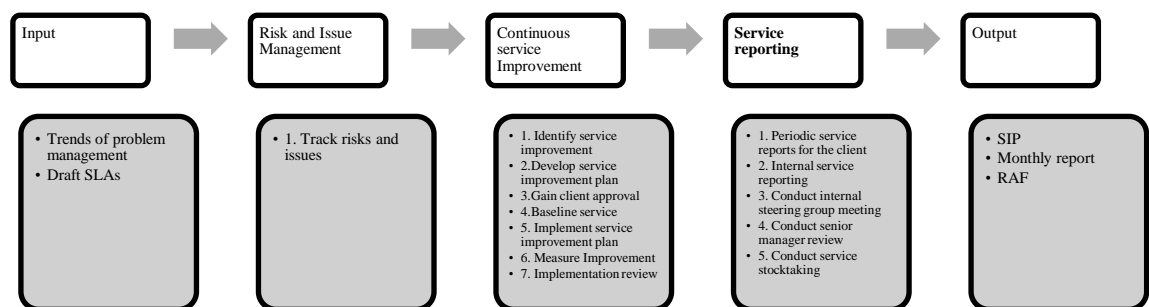
Figure 19. Ongoing Tasks in Capgemini Finland's Service Delivery (Capgemini Finland 2011)

The examination can be divided between external and internal reporting. Periodic service reports for the client should be produced at frequency agreed with the client to report Capgemini's performance against the Service Level Agreements (SLA). This is usually done monthly or in smaller services bimonthly. Input may be required from each of the service. The service report must undergo formal quality assurance and approval by the Service Level Manager before being issued to the client in advance of the service

review meeting. Service Delivery Manager is responsible for this in cooperation with Service Level Manager. The inputs of the client reporting process are a collection of small issues in the IT environment, i.e. ticket reports, and outputs are monthly reports. (Capgemini Finland, 2011)

Internal reporting differs a bit from the external reporting, but they also have similarities. The inputs are again ticket reports and in addition to delivery dashboard the outputs are monthly reports. SDM is usually responsible for the actual reporting but this time in cooperation with Senior Manager. These reports are made available to Senior Manager via a central repository or email. If the follow-up priority has changed, SDM will conduct reporting accordingly. Senior Manager and Risk Manager track reports according to follow-up priority. For larger (over 1 M€) engagements SDM prepares monthly reports, which cover wider and deeper situation of the service. (Capgemini Finland, 2011)

5.1. Employees' experiences with reporting

The example service that was studied was a partnership with a Finnish company in the retail sector. The current reporting form has been in use since the spring of 2011 and its contents are strongly focused on the Information Technology Service Management (ITSM) reports. ITSM is a reporting system that produces different tables and graphs about the incident and service request tickets that are raised during a certain time period. The ITSM report usually includes the amount of tickets, the percentages of the targeted service levels, ticket classification by type, raised problem tickets etc. In addition the monthly report can include availability reports, service desk reports, capacity reports, security reports and so on. Besides these there are also other reports that have to be delivered to the additional service meetings, but since they are reports that the selected company provides to their own customer, they are not analyzed. (IS1, 2011)

5.1.1. Making the report

According to the interviews there are several ways to do the internal reporting process. In the example service approximately 50 % of the data in a monthly report is printed and reported in India, whereas the rest is done mechanically in Finland. (IS 1; IS8, 2011) Usually this is the case with the reports that can be easily automated such as ITSM reports. The instructions are given to the Indian colleagues and sometimes there are even education sessions to clarify the needs of the reporting. An Indian team leader with a group of 3-4 people combines the report and delivers it back to Finland. Even though a part of the report is done in India, the final version must be analyzed in Finland before accepting it and delivering to the customer. This is because the reporting process requires it and of the lack of knowledge the Rightshore office may have. These (semi)automated reports are timed so that they will be delivered before a certain deadline. Basically the work done in India is a copy-paste job, so a simple A4 of instructions

is used. Since English is often the reporting language in Capgemini, using the Rightshore capacity does not bring extra problems with translation. (IS1; IS8, 2011) Of course some cultural differences may affect the understanding and cause challenges. (IS9, 2011)

Capacity reporting, as well as availability reporting, is usually done in Finland. By to date it has not been automated, and has to be delivered mechanically to a common file sharing system or directly to the SDMs. Capgemini has a file sharing portal of its own, which makes it possible to use a common folder for reporting. This reduces the need for emailing and calling after the reports. Giving a decent reporting form for the experts improves the quality of the reports, since there are fewer corrections to make. The main tasks that are done in Finland are corrections and finalizing the report. There are also often problems to be solved or clarified with the experts so that they can be easily explained to the customer in the next service meeting. Usually it takes 3-4 hours to make the report, unless there are a lot of things that need to be solved before the service meeting. That part is completely mechanical. (IS1; IS4, 2011)

At the moment Capgemini Finland has also a team in India, which provides internal reports for incident and problem management. The idea behind these reports is to support team management and control and give some back up for the employee evaluations. These reports can be used to show the ongoing status to the production teams, which are often concentrated on the jobs within a single team, not cross-functionally. (IS5, 2011) The current level of automation is around 50 % and if the company wants to move more of the reporting responsibility to India, it has to be raised closer to 100 %. (IS1; IS2, 2011)

5.1.2. Effect on the service and satisfaction

According to the interviews the whole reporting has a big effect on the overall customer satisfaction. The customers appreciate well done reports, which provide information of the current service levels. (IS1-8, 2011) In case there are some delays in the delivery, the customer usually mentions this and asks for explanations for bad performance. In general the customers are extremely interested in the reports and look and analyze them thoroughly. (IS1, 2011) The example customer has also made some requests about the reports, but the problem is often that the systems do not fulfill these needs and it is nearly impossible to make configurations. For example the customer may want to get detailed data about the tickets, but it requires too much mechanical work. (IS2, 2011)

The importance of correct reporting is also big for Capgemini, since it has a direct correlation to the service bonuses and sanctions. The bonuses are calculated based on the monthly service levels and if there are mistakes in these numbers, it may turn the bonuses to sanctions and vice versa. (IS8, 2011) The bonuses may form a significant percentage of the total value of a service, which means that getting the correct number is

essential. (IS3, 2011) The performance numbers are also the proof of what the customer gets from the service, so they have to be correct in order to maintain the customer satisfaction. (IS1, 2011) Also the employee sanctioning/bonus system is partially based on these numbers, which means that the average professionals have the interest towards these numbers. (IS5, 2011)

5.1.3. Focus and responsibilities

A topic that often rose up in the interviews was that the reporting processes are usually concentrated to the external reporting instead of internal reporting. The reason for this is obvious, since the customer is the one who pays for the reports, but on the other hand having the internal reporting on a good level improves the customer satisfaction. (IS1, 2011) According to another interviewee it is important to realize the different levels of reporting and provide reports accordingly. Even though the monthly service reports give a lot of information about the overall service level (especially from the customer's point of view) it is not probably the best tool to analyze the internal performance. That is why it is important to know which reports to use in which situations. (IS2, 2011)

Even though the goal is to decrease the amount of work done in Finland, there are many things to do before this can be implemented. According to the interviews the SDM should be the main responsibility for reporting, (IS1; IS2; IS5, 2011), but in certain cases an extra help could be justified. This is the case especially with bigger and more demanding customers. (IS6; IS7, 2011) At the moment the reporting responsibility is divided into different areas and for several people, such as team leader leaders. (IS5, 2011) SDMs consume a lot of time preparing the service meetings and keeping the customer relation on a good level, which means that all the extra work should be done elsewhere. The production experts in Finland are busy with solving the tickets, so combining and producing the reports should be reduced to minimum. ITSM reporting does not consume a lot of time, but other areas, such as availability and capacity reporting, demand more attention. Since these areas are often sanctioned, the level of performance has to be high and possible deficiencies have to be solved. (IS1, 2011) Finding the reasons for failures and deficiencies is an important part of SDM's job description and therefore cannot be avoided. (IS3, 2011)

5.1.4. Challenges with reporting

The service management side (IS1; IS2, 2011) saw that the problems with reporting arise from the problems in the production and that main problems lie deeper in the production, bad level of reporting being only a tip of the iceberg. (IS3, 2011) According to the same sources (IS1-3, 2011) the technical teams should assign the tickets more carefully, so that each service line would own its own tickets. This would reduce problems further along the process. According to an interviewee (IS2, 2011), "if the normal production worked efficiently there would be no need for internal reports". Since the pro-

duction experts do not realize the financial importance of service levels and reporting, the SDMs have to put more focus to the production, which reduces the amount of time that could be used to maintain the good relationships with the customer. (IS3, 2011) The technical side saw that the main problem is that "the data that is currently used for reports is static instead of dynamic, which means that it is impossible to keep up to date with the performance." (IS6, 2011)

Another problem with the current reporting was that there are too many different reports being made, which causes complexity and need for more and more instructions. The challenge is to find the right information from different reports that provide different results. Since the reporting systems such as ITSM can provide several different tables and graphs and since the customers demand different things, building common procedures may seem too difficult. Sometimes the manual reports do not match with the automated reports. This is often a problem especially in India. (IS4, 2011) The customer preferences also change every now and then, which causes additional work in reporting. Configuring the system to a customer demands a lot of time, which is a case especially with the new customers. (IS5, 2011) Another challenge was that there has not been much of an effort to improve the internal reporting. There are some reporting tools, which could be used, but since "no-one really knows how to use them they do not bring any extra value" (IS1, 2011).

Capgemini used to have an ITSM team in the UK, which was responsible for reporting, but after the relocating in India, the process is not performing at the same level. This is one of the reasons the amount of mechanical work has not decreased recently. "Of course having an ITSM team in India reduces the reporting tasks in Finland, but the total amount of work stays the same" (IS2, 2011). One interviewee from the production side estimated that the amount of time the Indian workers use is much bigger than what is needed in Finland for the same task. According to the same source "if I use 15 minutes for printing a single report, it can take up to 2 hours to get the same thing done in India" (IS4, 2011). In this particular case the advantage of moving certain tasks to the Rightshore office may not be beneficial but even more expensive than using Finnish resources. This is a reason why the jobs should not be moved to India before they are fully known and easy to delegate. In some cases, such as when reporting the data center performance, the reporting has to be done in Finland, because the reporting team has to have an actual access to the location. (IS7, 2011)

The status of the services is reported back to Finland on weekly basis, but the problem is that the technical leads may not have enough time to check out these files (IS4, 2011) or they do not know about their existence (IS7; IS8, 2011) The files are behind "too many clicks" and the team members do not have the straight access to these locations. So even if the information is provided it does not meet its purpose. (IS4; IS6, 2011) Some saw that this sort of reporting should be on-time, but it would require a portal of its own. (IS8, 2011) Not all the technical experts want the access to these reports, since

"they are not really interested in this sort of information, because they have hands full of their own tasks". (IS6, 2011).

According to two interviewees (IS3; IS4 2011), there are some big differences between the number of incident tickets when asked from different people. This can be seen as a substantial problem, because the sanctioning/bonus system is based on these numbers. The variation has been up to 30%, which means that this cannot be explained by a human mistake. (IS3, 2011) Since the performance levels of certain services do not only affect the service bonuses, but also employee bonuses it is a big problem for motivation if a service with hundreds of incident tickets a month is not evaluated. (IS8, 2011) All in all the interviewees saw that even some parts of reporting are automated, the whole reporting process is not even close to being ready and the level of reporting is poor. (IS1-8, 2011)

5.2. Internal reporting process

The following process model for monthly reporting was done in cooperation with the interviewed experts. It includes all the main processes that are done within the department when delivering the status of a service. SDM is responsible for the process and therefore can be seen as the main accountant. In some cases, especially with more demanding clients, the SDM may have an Engagement Coordinator helping with the reporting. Technical leads and their teams deliver reports to the SDM who analyzes these system reports and makes the final report. Certain information systems, such as System Center Operations Manager (SCOM) or ITSM provide their own reports that can be printed and forwarded directly to the SDM but in some cases the information needs to be collected manually. This demands more time and resources, especially when the reporting methods are not standardized. In order to improve the whole internal reporting the delays within the process need to be reduced and if possible, unnecessary actions must be deleted. The following flow chart (Figure 20) presents the usual reporting method within a Capgemini service. In order to keep it simple and readable the amount of system reports were reduced to 1. In a normal service there can be as many as 10 different reports that need to be asked, printed, delivered, analyzed, corrected and edited before handing the final monthly report to the customer. The amount of employees is also reduced, since there could be as many as 20 people making one single report in a service. (IS1-8, 2011; Capgemini Finland, 2011)
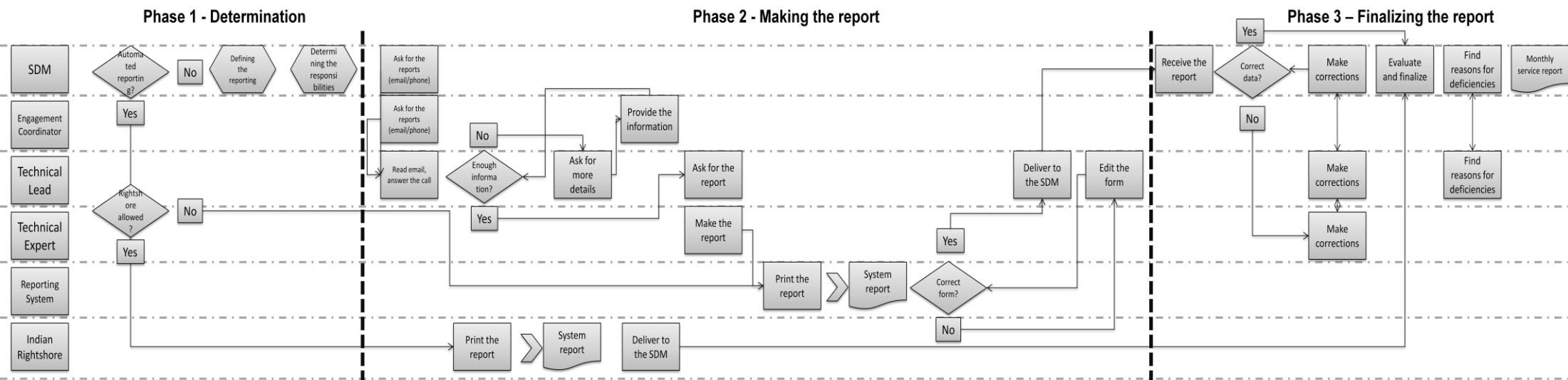
Figure 20. Internal reporting process in Capgemini Finland, flow-chart (based on the internal interviews, IS1-8, 2011)

The reporting process in Capgemini can be divided into three phases: determining the content of the report, making the actual report and finalizing the report. The first phase begins with defining whether the reporting process is already automated or is it still following the manual procedures. If the process is not automated the next step is to define the reporting needs and responsibilities. In some cases the whole or most of the reporting is automated, which means that the report is printed and delivered without further inquiries. If the Rightshore capabilities are allowed, India produces and delivers the report to the SDM and the whole process goes straight to the final phase. In most services there is an actual need for coordinating the process, since the instructions and differences between the services may vary. (IS1-8, 2011; Capgemini Finland, 2011)

The SDM is usually responsible for making sure that all the things promised in the contract are reported. He/she finds the correct persons of the technical teams and advises them how to report the status of certain services. This is done by using email or telephone. If the service is a new one and if the team is not totally familiar with the reporting practices, it might take a while before the correct professionals are found and the tasks are given. In the long-lasting services the routines are well-known and the whole process flows faster, unless there have been major changes between the teams or services. In some cases the data collecting process phase may take only minutes when all the relevant people are communicated immediately and effectively, but sometimes it can be as much as days before the responsibilities are found, usually due to unawareness of the tasks and reluctance to the whole reporting. This is why the SDM may have an Engagement Coordinator helping him/her with the determination. (IS1-8, 2011; Capgemini Finland, 2011)

When the correct persons (usually technical leads) are found the SDM provides the information, so that the technical leads can guide their team to make the reports. This is again done by email or telephone. In case there are some misunderstandings, the team members usually ask first their team leader, who then asks the SDM or Engagement Coordinator for more information. The SDM provides the needed information, either to the technical lead or straight to the professionals. When all the necessary information is shared, the professionals print the reports out of the systems. In some services there can be as many as 20 subservices, which means that there are dozens of different reports that need to be delivered. These system reports are analyzed, possibly edited to the correct form and then delivered to the SDM, who then checks them out for deficiencies. If the system report is fine and includes the right information, SDM accepts it and starts the final phase of the reporting. When the instructions are given properly and they are unambiguous, this phase should be ready in only a matter of hours, but again, if the information sharing is inadequate, it may last several days because of all the extra trouble that has to be done to get the correct reports. (IS1-8, 2011; Capgemini Finland, 2011)

If everything in the first and the second phase are done correctly, the third phase should be only a quick recap. What is needed is that the system reports are in the correct form, delivered on time and in the right place. The SDM analyzes the results of the system reports, evaluates the overall performance of the month, finds out the explanations for possible deficiencies and finalizes the whole process. If there are some corrections to be done, the SDM sends the report back to the technical experts and asks for more information. Usually there is no need for this, since the reports are already checked in the second phase. In the final report SDM provides a subjective evaluation of the current situation by using the traffic light technique and includes action points that help to improve the service in the future. There are big variances between different customers but the structure of the monthly reports stays almost the same. When the report is finalized, it can be delivered to the customer. (IS1-8, 2011; Capgemini Finland, 2011)

As the previous example describes, the internal reporting process can be done very quickly and easily or the hard way. Unfortunately one of the reasons behind the inefficient reporting is the wrong attitude towards it and reluctance to share the information even when asked. (IS1; IS2, 2011) The technical side may not understand the relevance of good reporting and on the other hand the SDM may not see how important it is to provide unambiguous instructions when asking for the reports. Another big problem is that there are no guidelines that could be used in all the services, because different customers demand different things. Many technical employees work for several customers at the time, so remembering all the demands is virtually impossible. (IS4-8, 2011)

5.3.   Requirements towards report documentation

In addition to analyzing the reporting process in Capgemini Finland also the actual report was analyzed. This was done by including the report to the interviews, so that the interviewees were able to give their ideas about the report. These results were compared to the findings in literature. Since some of the interviewees had been working for the selected service for only a short period of time, this analysis concentrated on the current report. The other option would have been to analyze the previous reports from a certain period of time, but it was in the interests of the company to keep the focus on possibilities rather than in the history. The analysis included a subjective part that was focused more on the readability, understandability and clearness of the reports.

According to Calvasina & Gray (1995) even though it may not have big relevance at the end, a proper title quickly resolves uncertainties about report content. The title should be self-explanatory, descriptive, and specific. Besides these, the basics of a proper title include identification of the reporting entity, the character of the report, what is being evaluated, how it is being evaluated, and the time period that is covered. Based on the interviews this has been on a good level in the selected service, mainly because there are certain guidelines that the Quality Management gives to all the services. (IS3, 2011;

Capgemini Finland QM, 2011) Another important thing when making the reports is that the reports should be tailored to the information needs of the actual users. There is no point making a report that is understood only within a team or even a unit. (Calvasina & Gray, 1995) This means that also the people who are not used to the reports and the terms should be able to read the reports. Technical teams usually present reports that are printed straight out of the reporting systems, but it should be realized that the SDMs may not be used to all the technical terms and definitions. (IS1-3; 2011)

It is not effective to prepare a report providing all the information about a responsibility center if it is not going to be used, but on the other hand it is a mistake to provide a report that contains only a few facts when the manager or the customer wants everything. (Calvasina & Gray, 1995) In other words only the relevant information used by the reader should be presented. A manager's position in the company is principal in determining the level of report detail to be presented. In Capgemini's case this is a bit more complicated because the same internal reports go to production teams and service management. In order to improve the information sharing the reports should be detailed enough for the production teams but understandable for the service management. Finding a balance between these two takes time and demands good communication. (IS2; IS4-6, 2011)

Internal reports should also be simple and straightforward; too much of complexity only confuses the whole process and the employees cannot see the reason behind reporting. (Calvasina & Gray, 1995) Even though the reports in Capgemini are straightforward, the interviews imply that the employees still find it hard to see the reason behind reporting. (IS1; IS3, 2011) Ideally, the internal reports should have a single central theme instead of presenting several ideas and evaluations all at once. If the user has to spend time differentiating the significant from the insignificant, the report is inefficient. When making the service report it is extremely important to see this difference because the same report is used also externally. (IS2; IS7, 2011) Absolute precision is not a prerequisite for usefulness, but the internal reports must be reasonably accurate so that the reliability remains and they must arrive in time to be useful. (Calvasina & Gray, 2011) The latter can be seen as major development point in Capgemini's reporting, especially in the services that are not yet automated. (IS1-8, 2011)

According to Calvasina & Gray (1995) report format and its content should be consistent from period to period. In Capgemini's case this is usually monthly, but also different time periods are covered. Changes in the content should be infrequent, but especially during the start up phase they occur very often. In Capgemini this has been a challenge, especially during the transition phases, when the customers do not know what they want to be presented in the reports. (IS6, 2011) Reports should also be consistent as to time intervals, such as daily, weekly, biweekly, and monthly time intervals. This is the key when identifying the development trends during a certain period of time. Even

though they measure the overall performance of the company, the internal reports should be constructive in tone. Too often, they are used as justification for inflicting punishment on managers for not achieving goals. Besides being important quality measurements for the client, the reports should be used to identify areas where corrective actions need to be taken and to identify managers who are performing capably. (Calvasina & Gray, 1995)

All in all the current state of report documentation is more or less on the desired level. What is more important is the development of the actual reporting process. The current reporting system provides a good basis for successful reporting, with the possibilities to automate and move tasks to Rightshore offices. Even though there might be a lot of unnecessary tasks that could be avoided, the overall process is simple and the responsibilities can be divided evenly. When the reporting is not automated, there are many variables that can affect the whole process and form bottlenecks if not working properly. A single task can stop the process, which means that all the parts must work efficiently to maintain the steady information flow. There are some ways to decrease the risk of bottlenecks that can be evaluated. The first option is to remove the whole task, which may cause problems further along the chain. The second option is to provide more resources, which can lead to a situation where the costs raise too high. The third option is to combine certain tasks, so that they would be done at the same time. These options and also others are evaluated in the chapter 6, which provides a new proposal for Capgemini Finland's reporting.

6. PROPOSAL FOR THE NEW REPORTING SYSTEM

The first thing to do when considering the improvement of internal reporting is to make a certain vision. If the vision is to be a provider that delivers the promised value for the customer, then the performance and reporting has to be on a level that fulfills these conditions. The company has to devote itself to this on all levels, which means that internal reporting cannot longer be seen as an unnecessary and time-consuming process that is only using resources without bringing any value for the company. (IS2, 2011) Since this study is a part of an internal development project it can be seen that successful internal reporting is regarded as an important part of the whole service delivery and it is believed to improve the whole business performance of the company. This was also one of the three underlying assumptions that were presented in the beginning.

The reasons behind the willingness to make certain improvements for internal reporting are obvious: by reducing the amount of work and standardizing the processes Capgemini will be able to cut costs and in the best scenario even move the whole reporting process to India, where the workforce is less expensive but professionalism is still high. (IS1, 2011) This can be seen as a combination of the ultimate goals since it would give the Finnish SDMs the opportunity to focus more on the relationship with the customer and devote themselves on the other ongoing tasks within the services. The other goal was to provide an up-to-date overview for the technical teams, which could then focus on the problems the moment they occur and not only in the beginning of the month after the monthly reports are run. This on the other hand demands a lot from the actual systems and cannot be only seen as a task that Capgemini can affect. In order to reach the level where the technical teams can follow the level of the service on time Capgemini has to find a reporting system that provides this sort of information. The third goal was to investigate the possibility to move to an all-automated reporting, where a single system would gather all the data and print it to form that could be delivered further. This again is something that Capgemini cannot solve by itself, since the external providers develop and deliver these reporting tools. After the unsuccessful attempt with the previous automated reporting tool (IS4; IS5, 2011), there might be some overall reluctance towards these systems that has to be overcome. This chapter presents the alternatives for the improvement suggestions and is followed by the actual proposal.

6.1. Choosing the new methods for internal reporting

As the analysis in the chapter 5 showed, the basic structure of Capgemini Finland's reporting process is reasonably good, but there are also many tasks or sub processes that could be improved. Lack of knowledge sharing, poor instructions, usage of wrong reporting systems and ineffective resource allocation bring easily problems that may grow bigger along the line, but fortunately after realizing these shortages they may be taken to a higher level. By making a few adjustments and a well planned implementation, Capgemini Finland will be much closer to the service levels that it has hoped to reach. (IS1-8, 2011)

Probably the most important sources of information for the improvements were the interviews that were conducted during September and October of 2011. A couple of main points rose above others that should be taken into consideration when making the final suggestions. A simple way to reduce the amount of work done in Finland is to automate the second phase of the flow chart, that includes asking for the reports, making corrections, providing more information and sending the emails back and forth. This can be easily automated by giving excellent and explicit instructions in the Phase 1. According to an interview (IS4, 2011) if the SDM asks for a certain report, delivering it can be automated in a way that a certain reporting system sends a message to the service desk, which then sends a report request for the responsible team. Then the team makes the report and delivers it to the SDM. Using this system requires only one set of explicit instructions, little configuration and after that the teams are aware what to do and when. This can be done also in a way where the expert who usually prints a system report, makes a request to the service desk for the next months report. (IS8, 2011) Either way the instructions should include unambiguous steps to make the report, what form should be used and when/where it should be delivered to. (IS5, 2011) Even though this action has already been in use in certain Capgemini services, it is necessary to spread it to all of the services. This can be seen as the first step for the service reporting automation. The updated flow chart shows the points where the changes should be made. (Figure 21)
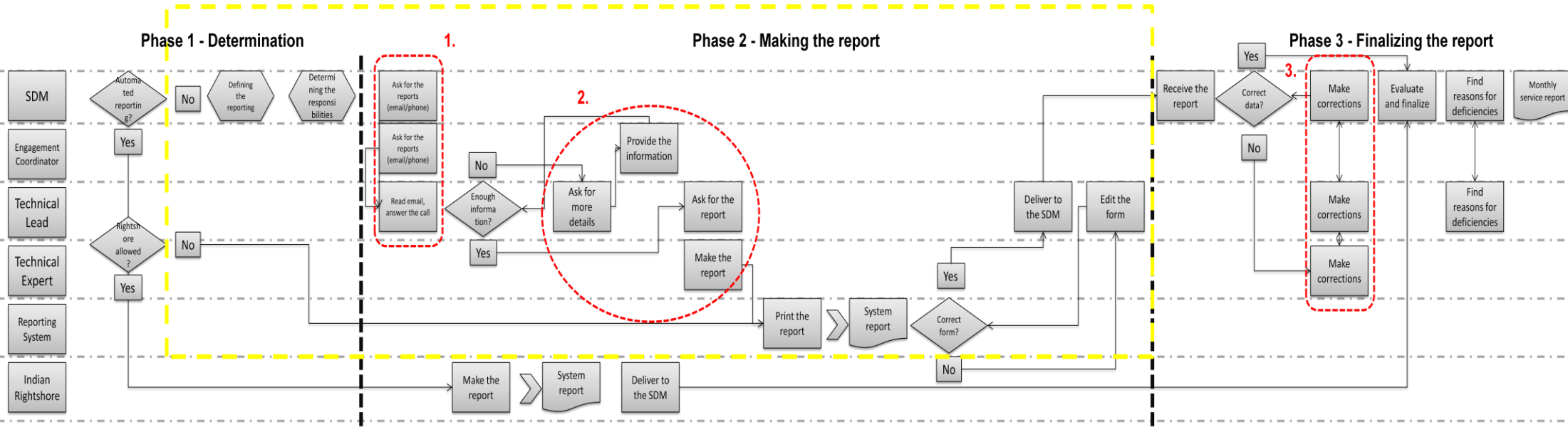
Figure 21. A flow chart describing the problems in Capgemini Finland's reporting (based on the internal interviews, IS1-8, 2011)

As it can be seen from the picture, a great amount of tasks can be reduced if the process is well planned. These subtasks are highlighted with red color and suggest the parts of the process that demand most of the time and (unnecessary) resources. Luckily, the amount of resources needed is easily reduced, since optimizing the red circles demands only good instructions and common rules for reporting. These changes are based on the interviews (IS1-8, 2011) and when done successfully, they should help to reach the ultimate goals of the whole developing process. By reducing the amount of the work that the SDM is doing the company may be able to save large amounts of money and reallocate the tasks by standardizing the process. The large yellow box demonstrates the part that could eventually be moved to India, but not before the performance level in Finland has reached the desired goals.

Another important point is to create a common reporting system for all the services. As the interviews imply, the customers are likely to accept the suggestions as long as they are good enough. Even though the customers may have different needs and desires, Capgemini should have one excellent reporting template that could be used to all of the customers. (IS1-8, 2011) Different alternatives for reporting should be listed according to the Service Level Agreements and the customers could pick the ones that fit their needs. The current reporting practices focus too much on the customer desires instead of suggesting a full coverage report that could serve them all. Using a single reporting process would also reduce the amount of work the SDMs must do since there would not be need for several instructions for every customer. The experts, who usually serve several customers at the time, could use a single set of instructions which would make it easier to make the reports. At the moment certain teams have instructions of their own, but using a common document would standardize this part of the process. (IS8, 2011) The SDMs could also share their knowledge with each other and suggest improvement for the whole company, not only within their own service. One reason for not having this sort of system yet could be that the company may have grown too quickly during the last years and the SDMs have not had the time for effective knowledge sharing. (IS7, 2011)

One of the interviewees (IS1, 2011) saw that tailoring the reports to customer needs is the only option at the moment, because there are no widely used standards in the reporting. As long as the procedures and processes are changing all the time, there is no use for standardized reporting. Also the fact that different customers demand different kind of reports supports the tailoring view. Since the reporting systems are not very flexible and can print only certain kind of reports the work has to be done mechanically. This takes the problem back to the very start, which means that goals about cutting costs and reducing extra work are not reached. One of the suggested solutions (IS1; IS2, 2011) was to move the mechanical work to India and let the old problem remain. In this scenario the employees in India could print the reporting data to a single Excel sheet and categorize them according to the customer needs. The customers would get the exact re-

ports they want and Capgemini would save costs because there would not be need for buying an expensive reporting system. These both reasons can be seen as a great advantage. On one hand this solution can be seen as reasonable, since the overall problem is a global one. On the other hand moving dull and unnecessary workload to India only postpones the solution and is very likely to cause problems in the future. (IS6, 2011)

Based on several interviews using a standardized reporting process could reduce the amount of work and cut costs. (IS3-IS5, 2011) Even though there were misbelieves whether the standardization can be taken into action, none of the interviewees disagreed with the benefits it is likely to bring. Also other studies suggest that standardizing the IT processes is a key to save money. According to van Wessel (2010) IT standardization process is usually carried out by an organization with the objective of providing specifications for an IT process to be continuously used in that company. The primary value for using IT standards is to improve business performance that results in business benefits. These benefits are: to cut costs; to improve customer satisfaction with the IT services offered; to facilitate interoperability and quality of the information systems; and to increase scalability and adaptability. It is widely accepted that the use of standards in IT saves money. This also increases IT maintainability, reliability and security. (van Wessel, 2010) Based on these facts, it is suggested that Capgemini Finland changes its service reporting from mechanical and unorganized to more automatic and highly standardized. Benefits from standardization can be as great as the following Table 4 presents.

Table 4. Benefits of IT standardization (modified from van Wessel 2010)

Area	Result
Improved quality	Straight forwardness and fewer errors.
Reduced costs	Time and costs decreases significantly.
Improved customer satisfaction	The satisfaction of using the standardized process increases. The throughput time of the process decreases significantly.
Overall improvements in operations	The new environment is more stable.

In order to automate a bigger part of reporting, an extensive study should be conducted to find out which tools could help making a better report. According to an interview (IS6, 2011) "at least all the hard numbers should be taken straight out of the systems, since there is always possibility to human errors when using mechanical reporting.

Changes in the teams, lack of resources and carelessness bring extra costs that can rise higher than the total cost of automated reporting tools." Before the full automation can be taken into action all the possible mechanical tasks should be moved to India in order to save costs. (IS1, 2011)

One of the most important issues that should be considered and developed is that the ongoing service situation should be reported to the production teams and analyzed more often than only once a month. Creating a monthly report is not enough because at that point it is too late to make any changes to the performance. (IS4-8, 2011) The reports are good tools when it is needed to show the team the last month's performance. Collecting and analyzing data weekly or even on a daily basis would give the SDM and also the production teams a view of the current situation and if there were some things that should be improved, the changes could be done before the end of the month. (IS 8, 2011) The current system is based too much on reporting, not monitoring, which makes it almost impossible to act proactively. According to another interviews (IS1; IS6; IS8, 2011) a single person should be named responsible for reporting in each production team. This person would make sure that the service issues would be handled on time and according to the desired service levels. This way the production teams would get a better understanding about the service characteristics.

The answer to the original research question "how the internal reporting can be improved within an IT service company?" is not a simple one. Certain challenges such as possible problems with standardization support the idea of moving mechanical work to India whereas the temptation to start the immediate standardization supports the ultimate goals of the company. Finding a solution between these two is challenging, but a not impossible. The next sub chapter presents the final proposal with a timetable that can be used for implementation.

6.2.   Schedule for the changes

The timetable for the suggested changes is divided into three phases. The first phase contains the actions that can and should be started immediately. The second phase can be taken into action after the first tasks are completed, which is assumed to take about two months. The timing of the third phase is more difficult to forecast because the accuracy is likely to decrease when making long term forecasts. Probably it can be started within the first six months after starting the whole development process. These three phases give a starting kick for the development process, but it is important to understand that the process is an ongoing one, which means that the length of it is not yet determined. As the interviews (IS1-8, 2011) imply, there should be a team in Capgemini, which would be completely focused on improving the reporting and could continue this developing process in the future.

6.2.1. Phase 1 – Scheduling, resourcing and making the instructions

Since the vision and the objects of the whole internal reporting development process are likely to maintain also in the future, the whole developing process starts with making a timetable and allocating a team that will be taking care of the process. The resources have to be selected and named. The number of team members will depend on Capgemini, but usually the project teams include around 5 main responsibilities. One person should be responsible for making the suggestion template for monthly reporting in cooperation with SDMs. This person begins the development by interviewing the SDMs and listing all the main contents that the current service reports include. Another person should be named to map the reporting possibilities that the current systems have. Finding a compromise between the client needs and system capabilities is one of the key targets in the first phase.

Since the old clients and their reports may be difficult to convert into the new reporting process, the updating can be started from making instructions to the production teams for how and what to report. The instructions should be in line within all the services, so that production teams would not get confused with too many preferences. A single person should be named responsible for making a template for reporting instructions. The instruction should be as readable and unambiguous as possible. It should contain information such as, what to report, when to report, where to send/save the document and in which form the document should be saved. SDMs play a big role in the beginning of the development project, since they are the ones who will deliver the message to the technical teams. This is why the SDMs from all services should gather for meetings and see what they can learn from each other's services.

None of the previous actions can be taken into use without the support of the management. This is why the whole development process should be prioritized high and valuable. As was noted in the theory section, the top management sponsorship is probably the greatest enabler of change.

6.2.2. Phase 2 – Taking the instructions into use, motivating the employees and suggesting the new template for the customers

After the timetables are made, the teams and responsibilities allocated, instructions written and rephrased it is time to take the changes into action. The first phase is likely to last couple of months, which means that the second phase can be started before the first quarter of 2012 ends (given that the development project begins in the beginning of 2012). In the second phase the new instructions are given to the technical teams. According to Ryan and Raducha-Grace (2010) making the changes in the production is likely to bring reluctance, but keeping the employees informed and providing extra

training should make the change possible. Motivating the teams with the fact that learning the new procedures will make their job easier in the future can be beneficial.

Before the technical teams are told how to report, the SDMs should create virtual file locations where to save the needed documents and reports. Using the email to deliver the reports is not advised, since "the reports tend to get lost along the way or end up in the trash folder" (IS6, 2011). According to another interviewee (IS7, 2011) "email is not a reporting tool, so it does not meet the purpose for reporting". When the possibilities for new reporting system are created, the old clients can be asked if they want to take the new reporting system into use. This means giving the suggested reporting template to the customers, where they can pick functions that they would like to have in the monthly report. The new system may be easier to sell to the new clients, since it can be seen as good as any other suggestion. In addition to the client service reports, also the reports for the technical teams should be created. These reports will include up-to-date information about the service levels and the team's performance. Probably it is impossible to provide on-time information, but the possibility to some sort of weekly measuring should be evaluated. This way the technical teams would get something in return and could react proactively to the deficiencies.

6.2.3. Phase 3 – Taking the new methods into action, moving tasks to India and evaluating further possibilities

When all the preparations for the implementation are done, the new methods are ready to be taken into action. This should be started with the new customers and moved on to the existing ones if suggested by the clients. Giving the customers the possibility to select the contents of a report from a pre-designed list supports both suggested ideas: standardizing the reporting and tailoring it to every customer. Moving the tasks to India can be done when everything is well organized and the possible challenges in the implementation are overcome. As it had been seen in the past, taking unfinished methods to the Rightshore office may cause even more problems than benefits.

After the three phase implementation the process needs to be developed further. The reporting development team has a big role in this, since it needs to look for new possibilities and challenges. Using automated reporting tools can be left aside for now, since evaluating its benefits needs much more research than what can be done in this study. The unsuccessful experiments during the last years do not support the idea of using these systems, but the ultimate goal is towards automation, which means that it is definitely something that Capgemini Finland should investigate further.

6.3. Financial implications of the proposal

Based on the interviews, the estimations about the time consumptions varied quite a lot between different parts of the reporting process. According to the SDMs (IS1-3, 2011) it takes a couple of hours to finalize the report and find reasons for deficiencies. Even though most of the process could be moved to India, these are costs that are extremely difficult to get rid of. What can be reduced is the amount of time that the service management uses for providing data and clarifications, which can take up to a full 8 hour day a month. Making a simple template that has all the relevant information about what/when/where needs to be reported, should take only one full day in maximum. So by using a single day for preparing this template and by filling it for every service part, the benefits could be seen already in the following month's reporting. In conclusion, making a template takes maximum of 8 hours (including asking the data from the production side etc.), filling the templates 0.5 hours/service part and after the changes the amount of time reduced would be 5 hours a month. To get an overall estimation about the cost savings this can be multiplied with the number of customers, but it is good to keep in mind that the numbers are subjective assumptions.

Providing the correct information reduces also the amount of work that the production side uses for reporting. (IS4-8, 2011) According to the interviews it is difficult to estimate the total time that a team uses for reporting, since it is not really monitored or followed. (IS4; IS6, 2011) Usually the technical leads use a couple of hours a month for guidance and a couple of hours a month for finding the reasons behind the deficiencies. The rough estimations about the team work load varied between a couple-of-hours-a-team to a couple-of-hours-a-person. It is good to take into account that some of the work is again unavoidable, such as finding the reasons behind deficiencies. Getting good and explicit instructions could reduce the total amount of work up to 50 % in a month. This again can be multiplied with the number of teams and services, but because of the different reporting practices between the teams it may not be reliable.

The third part that could bring cost benefits is moving most of the reporting to India. The price difference between Finnish and Indian specialists is roughly 80 %. (Capgemini Finland, 2011) So even if the amount of work increases when moving the tasks to India, the costs are very likely to decrease as long as the amount of work is not quadrupled. Of course preparing the transfer to India demands several working hours, but as was suggested earlier Capgemini Finland should have a team that concentrates on improving the reporting. Being as valuable as any other team in the company, it cannot be seen as an extra cost and therefore is not included in the calculations. What is included is a cost of the project that is needed for the implementation.

The final calculations suggest that even with the optimistic approach, there could be savings up 15 % when making proper instructions for the production teams. With the

pessimistic approach the number is even bigger, growing up to 53 %. When moving the tasks to India these numbers may grow even bigger: even if the amount of working hours is doubled because of the lack of knowledge, the savings can be as significant as 60 % due to the lower laboring costs. The whole project may cost up to 1200 hours of work, but with this sort of benefits, it can be seen beneficial in the long run. The calculations are presented in the Appendix 2.

7. DISCUSSION

7.1. Answers to the research questions

The research problem and the primary question of this study was to find out, how the internal reporting can be improved in an IT service company. The question was divided into three sub questions, which helped to study the main problem in detail. The first of the three sub questions asked: How, through what kind of a process, is internal reporting currently carried out? This question was answered in the chapter 5 where the whole Capgemini reporting process was cut into pieces and analyzed. The results showed that currently the process involves teams and employees from both Finland and Rightshore locations and the process is not even close to being ready, mainly due to lack of standardization and common procedures. The process was described in detail in a flowchart, which showed the usual components and resources of a reporting process. In short the process includes the following tasks: defining the reporting needs, determining the responsibilities, providing the information, printing the report, editing the report, delivering the report, evaluating and finalizing the report and finding the reasons for deficiencies. The input of the process is the performance data that the systems provide and the outcome is the actual monthly report that can be delivered to the customer.

The second and the third sub questions tried to find answers to the deficiencies that were found in the analysis and were therefore strongly related to the first sub question. The second sub questions opened the problem by asking what the improvement needs are in the current process, when seeking reporting efficiency. The third sub question took the solution into practice by telling how the internal reporting practice should be developed, to increase reporting efficiency. The most relevant improvement needs and the answers to the second sub question are: reducing the SDMs' workload, improving the current reporting instructions and reducing the amount of work that is used for corrections and editing, especially in Finland. The third sub question was answered in chapter 6, where the ultimate proposal for the company was presented. In short the solution included standardizing the tasks, making new reporting instructions, dedicating a team for reporting development, creating up-to-date performance reports for the production teams, using the correct reporting tools and finally moving most of the reporting process to the Rightshore office in India.

7.2. Theoretical implications

One of the underlying assumptions that guided this study was that good reporting enables better service levels and value for the customer. This idea was supported by Thompson (2007), who specified the relevance to IT project performance and moreover to its task, psychological and also organizational outcomes. Also the interviewees supported this idea and saw that reporting is extremely important since it is the proof of the company's performance. (IS1-8, 2011) Even though the theory and practice showed the relevance of quality reporting, implementing it is a whole different task. Snow & Keil (2002) found that the problems associated with difficult projects often begin with inaccurate status reporting whereas the interviews (IS1-3, 2011) imply that the problems arise from the production teams who are not performing on the desired level. Blaming each other and the external vendors is common and often seen as a way to get out of trouble. As a study by Park et al. (2008) showed, people are much more willing to report bad news when fault responsibility can be placed on an external vendor, which in Capgemini's case can be seen as the Rightshore office in India. The interviews showed that even though Capgemini expects the knowledge level to be almost equal between Finnish and Indian employees (Capgemini Finland, 2011) the attitude towards the Rightshore and the trust for Indian colleagues is not on the same level as it is towards Finnish employees. (IS1-9, 2011)

Another assumption was that in order to make the reporting effective, there is a need for standardizing it on a certain level. According to van Wessel (2010) IT standardization is likely to improve quality and result in straight forwardness and fewer errors. It is also likely to reduce costs and improve customer satisfaction due to smaller resource and time needs. Also the throughput time of a process, such as reporting, can be decreased through standardization. This theory was supported by the interviewees, who saw that in order to make the process more efficient the basic procedures, such as collecting the system reports, should be standardized. (IS2-8, 2011) Even though Epstein (2008) suggested using the email as a reporting tool, the practice and the experiences imply that it leads to missing reports and therefore cannot be used. (IS6, 2011) There was also another suggestion about not standardizing the processes but only moving them to India due to the complexity of customer preferences. (IS1, 2011) Even though this may seem reasonable at the moment and would bring cost benefits very quickly, it is not a strategic decision that would work in the long run. Moving the simple and dull tasks to India is more likely to cause dissatisfaction and only postpones the problem to the future. (IS4-6, 2011) This is why the given suggestion started with standardizing instead of knowledge transfer.

When certain processes are standardized they are usually moved to India in order to save even more costs. (Capgemini Finland, 2011) Moving the tasks to India is very likely to bring cost benefits, as long as the knowledge transfer is on the right level and the

Rightshore employees are trained properly. (IS1-8, 2011) Capgemini's estimation for the cost savings in India is 40 % whereas the calculations (Appendix 2) suggest that the benefit may be even 60 %. Having workforce in an offshore location is very typical for IT business and trend has been growing for several years. (Contractor et al., 2011) Even though moving the work to India may cause dissatisfaction among the Finnish employees, there is no need to be upset since the jobs are usually mechanical and dull. (IS1-8, 2011) There are also several reasons, why certain jobs still exist in Western countries, such as problems with transferring embedded and tacit knowledge and fear of data leakages and privacy problems. (Contractor et al., 2011)

The whole purpose of internal reporting can be seen as questionable. As implied by the interviews (IS1-3, 2011), if the production worked as it should, there would not even be need for internal reports. This idea was supported by Calvasina & Gray (1995) who saw that internal reports often have no underlying plan, reason, or rationale, but as Epstein (2008) stated, the internal reports often lead to external reports and therefore can be seen even more important as the external ones. One explanation for the reluctance towards internal reporting is the lack of focus that is given to it (Calvasina & Gray, 1995), but without internal reporting there would not be the data for the external reporting either. (IS1-8, 2011) When thinking about the internal reports and their relevance for the company, it is important to see that they are also the cornerstone for the external reporting and therefore also valuable for quality services.

7.3.   Practical implications

So how should Capgemini Finland take this proposal into action? As was described in the chapter 6, the implementation has to be done step-by-step and by taking all the necessary factors, such as employees, into account. As was stated by Ryan & Raducha-Grace (2010) the most significant challenges when implementing change projects are people oriented. Their findings demonstrate that the nontechnical factors have a bigger impact than technical ones, even when making changes inside an IT organization. Also the changing minds and attitudes are barriers for change and therefore Capgemini Finland and especially its managers should devote to the development project and support it right from the start. Based on Thompson et al.'s (2007) observations, it can be seen that quality can be achieved by building a strong linkage between team members and managers. Building a reporting system that captures the performance information is a good tool for this (Greaver, 1999) and will be taken into practice by allocating a team that has the responsibility for reporting.

Starting the new reporting methods with the new customers was reasoned by avoiding the changes and possible challenges with the old ones. On the other hand starting the change with the existing ones could have been easier, because those services are already well known. Since there are always barriers for chance as Ryan & Raducha-Grace

(2010) suggest and in order to keep the existing customers happy, the changes were decided to be tested with the new ones. This way the whole system can be taken into use gradually and also Capgemini Finland will be able to adjust to the changes. Making instructions for every service part may seem unreasonable and as just another quality management tool, which annoys the employees. In case all the services are about to be standardized there have to be rules to follow, so that the production teams know what to report and when.

Some employees are used to using email as a reporting tool, but this was something that was suggested to get rid of. As was stated in the interviews (IS6; IS7, 2011) using the email cannot be seen as an alternative since the employees have the tendency to lost the mails in the mailbox or trash. This is why the other alternative for document saving, virtual folders, was selected. Using the virtual folders is also good for further purposes: if there is a change in the management or if the reports need to be used elsewhere, they can be found easily without contacting the actual SDM of a certain service.

Based on the results and the financial calculations it looks like standardization and moving most of the reporting practices to India are the most cost efficient ways to improve internal reporting in Capgemini. One of the greatest suggestions was the new service template, which includes all the reported things that Capgemini Finland can provide. This suggestion may cause dissatisfaction in the sales department or on the customer side, but in order to standardize the reporting some sort of selection has to be done before selling. The current system where almost anything can be sold does not give a good picture of Capgemini as a service provider and also makes it very difficult to customize the reporting for every customer. (IS1-8, 2011) And as was stated before; giving the customers the possibility to select the contents of a report from a pre-designed list supports both suggested ideas: standardizing the reporting and tailoring it to every customer.

7.4.   Meeting the objectives

The goal of the research was to find several possible ways to reduce costs of the reporting and make a well argued proposal for the company. Standardizing the processes is a one way to cut cost and moving tasks to India is certainly another, even though it may take a bit longer. These suggestions also support the wishes that Capgemini Finland had for this research. Another goal was to reduce the work amount of the service delivery managers. Based on the calculations the amount of time that can be reduced with these changes is substantial. In addition it is not only the SDM who benefits from the suggested changes but also the production teams. The calculated total amount of reporting work that can be reduced in Finland by implementing the changes was around 60 %. (Appendix 2)

The study also aimed to analyze the differences between automatic and mechanical reporting and find a system that suits best the needs of the company. This part of the study was left with a little emphasis, mainly because it would have needed much more resources, time and calculations. A further, deeper research would have been needed to complete this part of the study as a whole. Another reason for the internal reporting developing was keeping the production teams up-to-date with the current status. This would bring more knowledge to the company and hopefully better service levels which may lead to better customer satisfaction. Creating up-to-date performance reports was one of the main suggestions and will hopefully show its relevance in the future as well as reaching the desired service levels, which was the third goal set by the company.

Based on the previous statements it can be seen that the research problem was covered together with the wishes that Capgemini Finland had. Also two out of three goals were met and a plan for the third one has already made. In addition to reducing the SDMs work, the given suggestion also reduced the total amount of work in Finland, which can be seen as a merit. The research also provided useful step-by-step instructions for the beginning of the implementation process, which will be valuable when taking the plan into action. Based on these facts, it can be seen that the research was successful. Only the implementation will show its real value for Capgemini Finland.

8. CONCLUSIONS

8.1. How to improve the internal service reporting in an IT outsourcing company?

Internal reporting is a combination of several tasks that have to work in unison in order to create real value for the company. Seeing the process in a whole is a one way to analyze it, but cutting it into pieces makes it easier to find reasons for hindrances, bottlenecks and parts that demand careful examination. When improving these parts one by one, the whole process will increase its value and provide better service for the customer. As any other process modeling, also service reporting has its restriction that has to be taken into account. Lack of resources, strict timetables and the problems with the knowledge sharing may cause challenges that are difficult to solve when the focus is on the normal production, not on developing the processes.

The suggested solution provided alternatives for the internal service reporting that has not been on the desired level in Capgemini Finland. Even though the research studied several options for cost and resource reduction, the ultimate solution was actually a simple one: by giving unambiguous instructions and making the process more standardized the company will be able to save both money and resources, both in Finland and in India. The ways to this standardization include collecting the reporting data into known locations, keeping the given schedules and making a reporting template that will be suggested to the new clients. What is needed is a new team that will devote its time for improving the reporting practices. In order to make the project more credible, the support from the management is needed. The final outcome of the whole developing process will be a cost reduction in addition to transferring the standardized tasks to India. What is more is weekly report that the production teams will get about their performance.

What makes this study relevant especially for the outsourcing companies? In today's business world, cutting the costs can be seen as a goal in all the fields of business, but because of the cost cutting characteristics of IT outsourcing, it can be seen even more important for these companies. Maintaining the quality and reputation is important during the whole implementation process and has to be kept on the right level, because the company is responsible for the services it is offering. The proposal suggested moving the tasks to offshore locations, which is especially popular in the IT sector and can be seen typical for these. All in all providing the professional service with lowest possible

costs is a goal to strive for. Improving the internal practices is not limited to reporting, but also other offshore possibilities should be evaluated.

8.2.   Limitations and ideas for further research

When evaluating the reliability and validity of this research, there are a few things that can affect the final results. Firstly, the number of interviewees was 8, which gave a good insight to the problems and the current situation, but because of the selection method was based on the interviewees' suggestions the results may be affected by certain biases. A larger number of interviewees could have brought more ideas and a wider insight, but would also have taken a lot of time and resources. Using a random selection would have had the same benefits, but probably would not have brought the right issues on the table. On the other hand interviewing employees from different levels was a good choice, because they represented the service in total and usually the people with the same profession had equal opinions about the situation. This could be seen especially in the production side, where interviewees had almost similar answers to the main questions. On average the interviewees were happy to give answers but at first many of them saw that they may not be the right people to ask from. Fortunately this was not the case, but probably more of way not to brag about the knowledge. The subjective characteristics of the interviewing part are likely to occur but they are also unavoidable.

A second factor that may affect the reliability of this research is that because of the complexity of Capgemini Finland's services, it is extremely difficult to make calculations that are useful for a whole department, let alone the company. The numbers and calculations that were presented in the chapter 6 were not the absolute truth but more of a way to see the trends and also a tool to give some backup for the given suggestions. In order to make those calculations more reliable a deeper research with the updated figures should be conducted. The same challenges occurred with the project estimation, which can change a lot when done properly.

Because of the rapidly changing IT business environment, it was not difficult to find up-to-date information, but it was a challenge to select the correct sources and use them in this particular study. Certain estimations that had been made nearly a decade ago may not seem reliable when evaluating them in detail, but they showed the trends and provided history data that was useful when starting the research. The theory part itself was a relevant insight that was needed before going too much in detail with reporting and process modeling. In order to get this part more interesting and valuable some debate would have been needed, but since the authors saw the IT business similarly there was not good possibilities for that.

Due to the security levels of certain documents, it was not possible to analyze and present all the documents that could have been useful for this research. There were re-

strictions to certain file locations and therefore the report contents could not be analyzed on the desired level. Anyway in total the given reports gave enough information for this study and if the reports need to be investigated in a deeper level more security levels have to be passed. Because of changes in the management and inside the department, this study lost some of its relevance along the way and therefore no more resources were allocated during the last months. Luckily the kick off was well conducted and the research was completed with the original instructions in the given timeframe.

All in all the research can be seen very useful for the company, since it raised points that need improvement and gave solutions for these. These points will most likely be taken into action in the near future. Even though the research raised at least as many questions as it answered to, it is mainly a positive thing; the topics for the further analyzes have been found: studying the possibilities of full automation and making financial calculations for the whole company are something that need researches of their own. For the external audience this research gives a good insight to developing reporting processes. It can also be used as a comparison to other studies in the same field of business and act as quick look into the IT world for the less experienced readers.

BIBLIOGRAFY

Abraham, K.G. & Taylor, S.K., 1993. Firms' use of outside contractors: theory and evidence. NBER Working Paper, US.

Barthelemy, J., 2003. The Seven Deadly Sins of Outsourcing. The Academy of Management Executive, Vol 17, Issue 2, pp. 87-100.

Beamount, N. & Costa, C., 2002. Information Technology Outsourcing in Australia. Information Resources Management Journal, Vol 15, Issue 3, pp. 14-31.

Bowhill, B., 2008. Business Planning and Control: Integrating Accounting, Strategy and People. John Wiley & Sons, UK, 634p.

Bragg, S.M., 2006. Outsourcing—A Guide to…Selecting the Correct Business Unit…Negotiating the Contract…Maintaining Control of the Process. John Wiley & Sons, Inc. USA, 400p.

Bryman, A. & Bell, E., 2003. Business Research Methods. Oxford University Press Inc, US, 624p.

Calvasina, R. V. & Gray, O. R., 1995. Internal reporting--help or frustration? CPA Journal, Vol 65, Issue 11, pp. 69-71.

Capgemini, 2011. The official website and internal documents.

Capgemini Finland, 2011. The official website and internal documents.

Capgemini Finland QM, 2011. Capgemini Finland's Quality Management, internal documents.

Cater-Steel, A., 2009. Information Technology Governance and Service Management: Frameworks and Adaptations. IGI Global, USA, 519p.

Charalambos L. I., 2009. Selective Status Reporting in Information Systems Projects: A Dyadic-Level Investigation. MIS Quarterly, Vol 33, Issue 4, pp. 785-810.

Cohen, M.S. & Zaidi, M.A., 2002. Global Skill Shortages. Edward Elgar Publishing, US, 400p.

Collin, P.H., 2006. Dictionary of Business, Fourth Edition. A & C Black, UK, 480p.

Contractor, F.J., Kumar, V., Kundu, S.K. & Pedersen, T., 2011. Global Outsourcing and Offshoring: An Integrated Approach to Theory and Corporate Strategy. Cambridge University Press, UK, 494p.

Cross, J., Earl, M.J. & Sampler, J.L., 1997. Transformation of the IT Function at British Petroleum. MIS Quarterly, Vol 21, Issue 4, pp. 401-423.

Cullen, S. & Willcocks, L.P., 2003. Intelligent IT Outsourcing: Eight Building Blocks to Success. Butterworth-Heinemann, UK, 249p.

Cullen, S., Willcocks, L. & Seddon, P., 2001. Information Technology Outsourcing Practices in Australia. Deloitte Touche Tohmatsu, Australia.

Deloitte, 2005. Calling a change in the outsourcing market: the realities for the world's largest organizations.

Dresdner, 2004. Dresdner Builds Internal Reporting Tool, Improves Automation. Operations Management, Vol 10, Issue 26, p. 4.

Epstein, M.J., 2008. Making Sustainability Work: Best Practices in Managing and Measuring Corporate Social, Environmental and Economic Impacts. Berrett-Koehler Publishers, Biddles Ltd, King's Lynn, UK, 290p.

Essvale Corporation Limited, 2011. Career Guidebook for IT in Consultancy. Essvale Corporation Limited, UK, 170p.

Eurostat, 2006. Statistische Amt der Europischen Gemeinschaften. Statistik kurz gefasst - Industrie, Handel und Dienstleistungen. Luxemburg: Amt framtliche Verffentlichungen der Europischen Gemeinschaften.

Foster, A., 2003. The procurement and bidding process. Technology Outsourcing, The Law Society, UK, pp. 6-65.

Gartner Group, 2004. IT Services Market Definitions Guide. Gartner Group, UK.

Greaver, M.F.II., 1999. Strategic Outsourcing: A Structured Approach to Outsourcing Decisions and Initiatives. Amacom, US, 314p.

Hardy, J.W. & Hubbard, E.D., 1976. Internal Reporting Guidelines: Their Coverage in Cost Accounting Texts. The Accounting Review, Vol 51, Issue 4, pp. 917-921.

Heng, C.S., Tan, B.C.Y. & Wei, K.K., 2003. De-escalation of commitment in software projects: Who matters? What matters? Information & Management, Vol 41, pp. 99–110.

Holt, J., 2009. A Pragmatic Guide to Business Process Modeling, Second Edition. BCS, UK, 245p.

ITAA, 2003. IT Workforce Survey, US.

IS1-9, 2011. Internal source, interviews, Capgemini Finland.

Jiang, J.J., Klein, G., Hwang, H.G., Huang, J. & Hung, S.Y., 2004. An exploration of the relationship between software development process maturity and project performance, Information & Management, Vol 41, pp. 279–288.

Kern, T., Lacity, M. & Willcocks, L.P., 2002. Netsourcing: Renting Applications and Services Over a Network. FT/Prentice Hall, US, 368p.

Kern, T. & Willcocks, L.P., 2002. Exploring relationship in information technology outsourcing: the interaction approach. European Journal of Information Systems, Vol 11, Issue 1, pp. 3-19.

Kyriazoglou, J., 2010. IT Strategic and Operational Controls. IT Governance, Cambridgeshire, UK, 679p.

Lacity, M.C., Willcocks, L.P. & Feeny, F.P., 1996. The Value of Selective IT Sourcing. Sloan Management Review, Vol 37, Issue 3, pp. 13-25.

Langfield-Smith, K. & Smith, D., 2003. Management control systems and trust in outsourcing relationships. Management Accounting Research, Vol 14, Issue 3, pp. 281-307.

Laudon, K.C. & Laudon, J.P., 2005. Essentials of management information systems - Managing the digital firm. Pearson Education, 736p.

Lewin, A.Y. & Peeters, C., 2006. Offshoring Work: Business Hype or the Onset of Fundamental Transformation? Long Range Planning, Vol 39, Issue 3, pp. 221-239.

Linder, J., 2004. Transformational Outsourcing. MIT Sloan Management Review, Vol 45, Issue 2, pp. 52-58.

Mann, C.L., 2003. Globalization of IT services and white collar jobs: the next wave of productivity growth. International Economics Policy Briefs, December, 13p.

Manning, S., Massini, S. & Lewin, A.Y., 2008. A Dynamic Perspective on Next-Generation Offshoring: The Global Sourcing of Science and Engineering Talent. Academy of Management Perspectives, Vol 22, Issue 3, pp. 35-54.

McCarthy, J., Dash, A., Liddell, H., Ross, C.F., & Temkin, B.D., 2002. 3.3 Million US services jobs to go offshore. Forrester Research Tech Strategy.

McKinsey Global Institute, 2003. Offshoring: Is it a Win-Win Game? McKinsey & Company, US.

Mears, J., 2004. The promise of offshoring. Network World, US.

Microsoft, 2011. The Official Webpage. [http://www.microsoft.com]. Retrieved 24.11.2011.

OGC, 2005. Introduction to ITIL Book. TSO, UK, 242p.

Palmer, R., 2005. IT service management foundations: ITIL study guide. Gulf Stream Press, US, 270p.

Park, C.W., Im, G. & Keil, M., 2008. Overcoming the Mum Effect in IT Project Reporting: Impacts of Fault Responsibility and Time Urgency. Journal of the Association for Information Systems, Vol 9, Issue 7, pp. 409-431.

Park, C.W., Keil, M. & Kim, J.W., 2009. The Effect of IT Failure Impact and Personal Morality on IT Project Reporting Behavior. IEEE Transactions on Engineering Management, Vol 56, Issue 1, pp. 45-60.

Power, M. J., Desouza, K.C. & Bonifazi, C., 2006. The Outsourcing Handbook: How to Implement a Successful Outsourcing Process. Kogan Page, US, 240p.

Praeg, C.P. & Spath, D., 2011. Quality Management for IT Services: Perspectives on Business and Process Performance. IGI Global, US, 348 p.

Qu, Z., & Brocklehurst, M., 2003. What will it take china to become a competitive force in offshore outsourcing? An analysis of the role of transaction costs in supplier selection. Journal of Information Technology, Vol 18, Issue 1, pp. 53-67.

Ross, J. W. & Weill, P., 2002. Six IT Decisions Your IT People Shouldn't Make. Harvard Business Review, November, pp. 84-91.

Ryan, R. & Raducha-Grace, T., 2010. The Business of IT: How to Improve Service and Lower Costs. IBM Press. US, 321p.

Senft, S. & Gallegos, F., 2009. Information Technology Control and Audit, Third Edition. Auerbach Publications, US, 448 p.

Snow, A. P. & Keil, M., 2002. The Challenge of Accurate Software Project Status Reporting: A Two-Stage Model Incorporating Status Errors and Reporting Bias. IEEE Transactions on Engineering Management, Vol 49, Issue 4, pp. 491-504.

Solli-Saether, H. & Gottschalk, P., 2010. Managing IT Outsourcing Performance. IGI Global, 268p.

TBS, 2008. Treasury Board Secretariat. Performance Reporting Principles and Guidelines, 15p.

Thompson, R.L., Smith, H.J. & Iacovou, C.L., 2007. The linkage between reporting quality and performance in IS projects. Information & Management Vol 44, pp. 196–205.

Thondavadi, N. & Albert, G., 2004. Offshore Outsourcing: Path to New Efficiencies in IT and Business Processes. First Books, US, 228p.

UNCTAD, 2004. World Investment Report: The Shift Towards Services. US.

van Wessel, R., 2010. Toward Corporate IT Standardization Management - Frameworks and Solutions. IGI Global, US, 305p.

Willcocks, L., Petherbridge, P. & Olson, N., 2002. Making IT Count: Strategy, Delivery, Infrastructure. Butterworth-Heinemann, UK, 288p.

WTO, 2009. World Trade Statistics, World Trade Organization, Switzerland.

APPENDICES (3)

Appendix 1. List of interviewees.

#	Job description	Job field	Date	Duration
Internal source 1 (IS1)	Process Owner	Service Delivery	1.9.2011	45 min
IS2	Service Manager	Service Delivery	5.9.2011	60 min
IS3	Incident Manager	Service Delivery	19.9.2011	35 min
IS4	Team Leader	Production	12.10.2011	39 min
IS5	Team Leader	Production	18.10.2011	44 min
IS6	Team Leader	Production	19.10.2011	48 min
IS7	Team Leader	Production	24.10.2011	34 min
IS8	Team Leader	Production	1.11.2011	32 min
Average				42 min
IS9	Sales Manager	Sales	2.11.2011	Training clinic

Appendix 2. Financial calculations for estimating the implications of the proposed internal reporting system.

Pessimistic Approach, no instructions:					
Starting point:	Hours used	Total	Number of people/service	Total hours	
SDM	8 (instructions)+3 deficiencies	11	1	11	
Engagement Coordinator	5 (instructions)+1 deficiencies	6	1	6	
Technical Lead	3 (instructions)+3 deficiencies	6	5	30	
Technical Expert	4 (creating and delivering the report)	4	2	8	
		27	9	55	
Optimistic Approach, no instructions:					
SDM	3 (instructions)+2 deficiencies	5	1	5	
Engagement Coordinator	N/A	0	0	0	
Technical Lead	2 (instructions)+1 deficiencies	3	3	9	
Technical Expert	1 (creating and delivering the report)	1	1	1	
		9	5	15	
Pessimistic Approach, with instructions:					
Results:	Hours used	Total	Number of people/service	Total hours	Results vs. Starting point(%)
SDM	3 for deficiencies	3	1	3	
Engagement Coordinator	1 for deficiencies	1	1	1	
Technical Lead	3 for deficiencies	3	5	15	
Technical Expert	2 (creating and delivering the report)	2	2	4	
		9	9	23	-58 %
Amount of extra work needed:					
8h for the templates		8	1	8	
0,5h each part of the service		0,5	10	5	
				13	
			Total work needed	36	-53 %
Optimistic Approach, with instructions:					
SDM	2 for deficiencies	2	1	2	
Engagement Coordinator	N/A	0	0	0	
Technical Lead	1 for deficiencies	1	3	3	
Technical Expert	1 (creating and delivering the report)	1	1	1	
		4	5	6	-60 %
Amount of extra work needed:					
4h for the templates		4	1	4	
0,5h each part of the service		0,5	6	3	
				7	
			Total work needed	13	-15 %
Finland vs. India	Cost	Time needed			
Finnish specialist	5	1		5	
Indian specialist	1	2		2	-60 %
Amount of extra work needed:	Hours/month	Months	Number of people	Total hours	
Project of 6 months, 5 people, 20h/month= 600h	20	6	5	600	
Implementation in India about the same	20	6	5	600	
				1200	

Appendix 3. The questions for the interviews.

Background questions:

Who are you? Tell something about yourself and your background.

For how long have you been working for Capgemini?

What is your job title? What do you do at work?

How long have you been working in the current position? Do you have a reporting responsibility? If so, for how long have you had it?

What kind of services/clients are you working with at the moment?

Theme questions:

How would you describe the reporting practices in your service?

How the monthly reporting is conducted in practice? Do you have certain established procedures?

What is reported at the moment? Does it make any sense to report these things? Where is the report delivered to? Who finalizes the report?

How many people in your team help with making the report?

Is the guidance to reporting on the right level? Does your team have instructions to follow?

Is your team performance evaluated and reported? If so, how many times a month/year?

In your opinion, what is the overall level of the current reporting?

The more specific questions:

In your opinion, what are the greatest challenges in the current internal reporting? How would you solve these challenges?

How much time do you/does your team use for making the report (in a month)?

How much mechanical work does the reporting demand?

What sort of information would you/your team need in order to reach the desired service levels?

Has the customer made any suggestions about improving the reporting? If so, what kind of suggestions?

Is the current reporting automatic in any level? What is your opinion about using the automated reporting tools?

In your opinion, who should have the final responsibility for reporting?

What is the significance of reporting quality, when delivering the service?

How would you modify the following flow chart, which describes the reporting in Capgemini Finland?

The final questions:

Do you have any other wishes or suggestions regarding the internal reporting in Capgemini Finland?

Who should I interview next? Any suggestions?