MOBILE CONSULTANCY WORK – SOCIAL INTERACTION THROUGH ENABLING TECHNOLOGIES

Master’s (two year) thesis in Informatics (30 credits)

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Foreword

The journey of this study has been very rewarding and educational for us authors. We wish the readers a pleasant reading and equal educational experience that we've had. We would like to thank everyone who has been involved and supported us in our thesis writing:

- Our supervisor Rikard Lindgren, Professor at School of Business and IT at university of Borås, for his time, all the good advices, improvements and guidance through the entire study.

- We would also like to thank our respondents at NaviPro, Sogeti and Logica who took their time to meet with us and answer our questions, without their participation the study would not have been completed.

Borås, 11\textsuperscript{th} of June, 2012

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Title: Mobile Consultancy Work - Social Interaction through Enabling Technologies

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Abstract
The shift toward mobility have today created higher demands on companies, consultants, the right use of working methods, workplace strategies, the information sharing as well as the interaction and collaboration with different customers. If consultants are able to work effective outside the office, from everywhere and at any time regardless of location with the help of mobile technologies, companies can reduce unnecessary costs, gain market share and competitive advantages. This study examines how mobile technologies enable social interaction of IT consultants’ mobile work. The purpose of this Master thesis is to identify IT consultants’ mobile work and the existing implications in mobility today. The thesis will also bring up the set of problems with mobility to the surface and create a deeper understanding of IT consultants’ mobile work and more knowledge about mobile technologies and how they can enable social interaction.

The thesis’ empirical foundation is derived from 18 interviews with representatives from; NaviPro, Sogeti and Logica. The interviews will provide the reader with a better understanding in; how mobile technologies can enable social interaction and which implications consultants face during their mobile work. The theoretical basis is composed from secondary data to receive an understanding and background to the problem area. The empirical data is then analyzed by means of presented theories which are also assumed in the preparation of the interviews. We have come to the conclusion that today’s technology has failed to satisfy the consultants’ social needs and that there are significant implications that can result in lack of face-to-face interaction, social and professional isolation and higher demands of constantly be reachable. However, with the access of laptops, smartphones and mobile broadband consultants can minimize following implications and perform more than 50% of their work and still be a productive and effective consultant.

Keywords: Mobility, Mobile working, IT Consultants, Enabling Technologies, Social Interaction, Implications, ICT
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INTRODUCTION

This chapter aims to provide the reader with a background and justification of the research topic leading up to the problem area, then some valuable information about the objectives, limitations and research questions. It will also discuss the view of the study, expected outcomes, limitations and target audience. The chapter concludes with an outline of the study design.

1.1 READERS GUIDE

The following section provides the outline for this thesis chapter by chapter.

- **Chapter 1. Introduction.** The first chapter aims to provide the reader with a background, the purpose of the thesis and describe the problem area. It will also discuss the view of the study, expected outcomes, limitations and target audience. Then we will present the question that we are going to handle in this thesis.

- **Chapter 2. Method.** This chapter describes the methods that we used to answer the problem questions of the thesis and to reach its purpose. It begins with a brief description / summary of its purpose and approach. Then presents the method of collection, analysis and evaluation.

- **Chapter 3. Theoretical Study.** This chapter presents an insight into the research area and gives the reader a survey of how the scientific debate about how the substance is transferred. The chapter begins with a presentation of how mobility is defined. The theoretical framework contains a justification of internal and external implications of mobility and social interaction. This chapter also focuses on enabling technologies.

- **Chapter 4. Case Study 1.** This chapter gives a presentation of the interview companies and all consultants that participate in this study. It gives an insight to the interview answers and knowledge gained from the first interviews.

- **Chapter 5. Case Study 2.** This chapter is based on chapter 4, which presents the additional interviews, conducted from the previous answers. This has been implemented to create a broader understanding of what implications arises from mobility as well as what social interaction really means and what impact it has on the consultants’ mobile work.

- **Chapter 6. Analysis.** The following chapter analyzes the empirical data with the support of chapter 3 and chapter 4. The chapter consists an analysis based on the three sub questions; How can mobility facilitate consultants’ mobile work? What are the implications of mobility? How can we streamline mobility and avoid the implications?

- **Chapter 7. Conclusion.** This chapter will present the explicit conclusions and answers drawn from the theory and empirical data for this study. The
chapter also answers the problems and implications that led to the thesis together with a presentation of results from case studies.

- **Chapter 8. Discussion.** The last chapter discusses the choice of method and how it obtains validity and reliability. The chapter will also present recommendations for future studies within this subject field.

### 1.2 BACKGROUND

The business world is no longer behind a desk or a computer screen, instead mobility is today at the core of many IT consultants working environment, allowing consultants to work more independent from time and place, solving multi-tasks with help of mobile working solutions and devices, e.g., smartphone, laptop, computers, PDA’s and email devices (Schaffers, 2005). With mobile working companies can have a more dynamic and connected working environment, one that gives consultants greater flexibility and fosters more spontaneous interaction and collaboration with employees and clients both in and outside the office (Rungta, Tierney, & Towels, 2008).

The shift towards mobility have increased the consultants’ mobile work and working time by 50-90% and the number of mobile workers is according to IDC’s International Data Corporation, set to exceed from 1 billion in 2010 to more than 1.3 billion in 2015, representing 37.2% of the total workforce (Axtell, Hislop, & Whittaker, 2008; IDC, 2012). The fact that consultants work in a more fast-paced, evolving environment with the freedom to decide their own task and control their own work anytime, anywhere at any place, result in the need of different mobile technologies, ICT solutions and workspace innovation in order to support consultants and the interaction between customers and colleagues (Axtell, et al., 2008; Rungta, et al., 2008; Schaffers, Brodt, Pallot, & Prinz, 2006). Different mobile technologies will offer new possibilities and opportunities for companies to improve their productivity, effectiveness and allow full access to the company’s resources (Andersson & Lindgren, 2005; Basole, 2007; Schaffers, 2005; Siau, Nah, & Sheng, 2005; Susan, 2010). Therefore, companies need to use the right mobile technologies, working methods, workplace strategies in order to improve adaptability, access, and interaction among consultants, employees, customers, partners and suppliers, in order to produce value and be more productive both in and out of the office (Basole, 2007).

Although mobile working enables workforces to be more flexible and productive allowing consultants to complete different tasks by accessing a range of systems and services whilst working outside the office, companies will still face several implications when working mobile and with different portable devices as well as telecommunications facilities (Rungta, et al., 2008). The shift towards mobility will render multiple technological, social and organizational challenges, which requires that companies obtain a clear understanding of user behavior in a mobile environment to ensure successful interaction with the employees and the customers (Benbunan-Fich & Benbunan, 2007). If companies are able to identify and face different implications in the mobile working environment through the use of different mobile technologies, they can ensure market success and meet the customers’ needs much easier (Benbunan-Fich & Benbunan, 2007). It is also
important that companies have fresh insights of mobility associated with different mobile technologies in order to allow their employees to access a range of systems and services from any location without restrictions of wires (Watson & Lightfoot, 2003). Companies also need to find ways to utilize the latest technology to make IT consultants’ work more effective and productive regardless of location, whether it is in the car, in the client’s office or at home. If consultants are able to work effective outside the office companies can reduce unnecessary costs, enable consultants to work from everywhere and at any time, gain market share and competitive advantages (Watson & Lightfoot, 2003). In this research we will explore how consultants can work effective both in and outside the office with the help of mobile technologies, we will also examine different implications of mobility today and how mobile technologies can enable social interaction.

1.3 PURPOSE
The objective of this Master’s Thesis is to identify IT consultants’ mobile work and the existing implications in mobility today. The thesis will also investigate how mobile technologies enable social interaction. The purpose is to bring up the set of problems with mobility to the surface and get a deeper understanding of IT consultants’ mobile work and more knowledge about mobile technologies and how they can enable social interaction. The purpose is also to facilitate the consultants’ mobile work by identifying the problems that occur today and develop solution proposals that can facilitate the consultants’ mobile work.

The study is aimed to anyone interested in learning more about the way IT consultant’s work when they work mobile. To be more specific, this study is aimed first and foremost to the well-established IT consultants and recent IT consultants, as well as future consultants and those with large IT interest. This study will be useful for consultants for years to come, as it gives a clear picture of what factors are important in consultants’ mobile work and how implications of mobility can be streamlined. On a longer term we also hope that the knowledge we obtain leads to continued research in the field and can be an inspiration and source of ideas for other students for further research and knowledge in the subject.

1.4 LIMITATIONS AND ASSUMPTIONS
The thesis only aim on investigating and improving the mobile work of IT consultants and not consultants in general. Nor will any experimental validation of their mobile work be performed. However, a deep analysis and a literature review is performed to gather a deep understanding of the area. The limitation lies on interviews instead of surveys, observations and data valuated information.

1.4 RESEARCH QUESTIONS
The thesis focuses on how do mobile technologies enable social interaction of IT consultants’ mobile work. Our purpose is to bring up the set of problems to the surface and get a deeper understanding of IT consultants’ mobile work and more knowledge about mobile technologies and how they can enable social interaction. Our thesis will answer following questions:
How do mobile technologies enable social interaction in consultancy work?
How can mobility facilitate consultants’ mobile work?
What are the implications of mobility?
How can we streamline mobility and avoid the implications?

1.5 EXPECTED RESULT
The expected result of this study is to provide detailed descriptions and create an understanding of IT consultants’ mobility, the enabling technologies that are used and what implication there is in mobility. The expected result is also included to highlight the importance of mobile working and how it is affected by the technology used by IT consultants when they work mobile. The primary expected outcome of this study is to describe, understand and analyze the implications that consultants may encounter and how this affects the social interaction.
2 METHOD

This chapter aims to give the reader an insight on how the authors pure scientifically have proceeded to conduct this research. It begins with a brief description / summary of its purpose and approach, then present the method of collection, analysis and evaluation.

2.1 DESCRIPTION/ SUMMARY

This study was initiated primarily by a very deep theoretical study where the important aspects are studied and described. The theoretical work provides a comprehensive study of mobility and the technology that makes it easier for IT consultants. The work process was iterative with structured steps between theoretical framework and method development, method development and case studies and from case studies to analysis. This makes space for modification along the changing conditions. There were interviews conducted parallel with the theoretical chapter to get a deep understanding as possible of the subject. After the theoretical framework and a theoretical starting point were obtained, the study could take the next step in the investigation. The study is conducted by two interview occasions, the first one was to get an initially and deep understanding of the topic, the enabling technologies that are used and the implications consultants face. The second interview occasion was more focused on feedback and how the implications affect the social interaction.

![Figure 1: The work process](image)

2.2 RESEARCH STRATEGY

The study has an inductive and a deductive approach. A deductive approach because the theory proves that there is an existing problem with mobility today and that there is existing theory about the technologies that can facilitate the consultants’ mobile work. An inductive approach is used because the authors have based the study on real cases through case studies, as well as creating new knowledge, goals, and theory along the way.
The empirical data uses theory as a basis for interpreting what emerged during the interviews, but also in order to analyze the data the authors have collected and been able to formulate any additional interview questions. After the data collection is complete the authors have used theory to develop the data that have occurred. The study has an inductive alignment which means that the empirical part has affected the theoretical framework, the authors have during the empirical study created new theory. In the analysis the authors will connect the empirical study to the theoretical framework. The result is the foundation for the analysis chapter that will conclude the thesis.

2.3 DATACOLLECTION METHOD

This study includes qualitative methods because the authors have conducted structured interviews. Hermeneutical approach is applied with the interviews because the authors want to gain a deep knowledge and understanding of the existing problem. The perspectives starting point is based on the data that has been received through interviews (Bryman & Bell, 2011). The interviewed consultants were selected carefully to ensure an adequate selection. The authors acquired a deep knowledge of mobility and the enabling technology that used to increase efficiency. An analysis, reflection and further interviews have been conducted; this was done until the study’s purpose was achieved, to generate a theoretical saturation. Chapter 6 analyzes the case studies with the support of chapter 3 and chapter 4-5. The chapter consist an analysis based on the three sub questions; How can mobility facilitate consultants’ mobile work? What are the implications of mobility? How can we streamline mobility and avoid the implications? Respondents have received a certification of the results of the analysis to confirm that the study gives a fair idea of their opinions. In this study, there has been a non-random sampling, because it means that not everyone in the target population has the same chance of being interviewed. Since there was a qualitative study with limited resources, the authors believe it is important to select respondents who have a very deep knowledge on the subject rather than to obtain statistically correct results.

This study is entirely based on IT consultants’ mobility and their answers. According to Patel and Davidson (2003), a qualitative interview contains a low degree of structuring, which promotes the study. Already at the beginning of the study, it was a desire to give the respondents the possibility to respond openly to get out as much as possible of the interview (Patel & Davidson, 2011). Sound recordings and well-written notes during each interview made it possible to record the interviews in a diligent manner (Bryman & Bell, 2011). The purpose of the sound recordings was to get the interviewers precise answers recorded and then be able to listen to the recorded data afterwards. The collection was conducted through various interviews with various IT consultants. The qualitative data collection method seemed like the right way to conduct the investigation because it gives more comprehensive results than what a survey would have done. The qualitative data collection method contributed a greater understanding of the subject, especially since it was possible to ask follow-up questions that allow one to reformulate and discuss the questions and answers until they are 100% understood (Patel & Davidson, 2011).
2.4 ANALYSIS METHOD
The theoretical chapter is conducted through a structural analysis, which can be seen as a way of explaining. The idea of the structural analysis of texts is to sift out the hidden meanings that lie below the surface and then let the elements in the texts that appear to have similarities with each other or the same sentence connect together (Bryman & Bell, 2011). The theory will describe the primary aspects that the survey is about (Patel & Davidson, 2011). The idea is to first of all give a basic but also a deep understanding of the digital and technological devices that are used in mobile working, but also describe mobile implications and how it affect social interaction (Bryman & Bell, 2011). In the theory chapter there have been brief descriptions of various technological means that are used in mobile working situations, such as laptop and cell phone. The authors have considered that it is very relevant to analyze technological agents as they are considered to be key devices to consultants’ mobile work (Patel & Davidson, 2011). The analysis was conducted by compiling all the results from the interviews into text form (Bryman & Bell, 2011). The purpose of this was to provide a global overview with a complete picture of the results, which the authors believe they have accomplished because the interviews gain meaning only when they are assembled into a complete picture.

During the case studies, IT consultants, their mobile work and the technologies they use where studied and analyzed to get an understanding of the implications. The authors believe that it may be a great advantage to actively study methods, practices and technology that are used to discern differences. Because the time was limited, the authors have not been able to do all the interviews that had been needed to carry out full generalization at the enterprise level. The idea was to form an individual perspective and understanding but also create a common picture of the different individuals involved and then identify the changes and similarities at the individual level. The analysis phase was very iterative and the authors collect data until a theoretical saturation occurred.

2.5 EVALUATION METHOD
In this study, using a qualitative method has continuously aimed to maintain validity and reliability to provide as credible results as possible. According to Sandberg and Faugert (2007) the assessment and evaluation criteria is of great the central value, "evaluation refers to a systematic increase in an activity value and importance" (Sandberg & Faugert, 2007). The evaluation is designed in a careful and patiently way because the essay is intended to create an understanding of knowledge. The evaluation is composed of an examination of understanding to create reliable generalizations of the results of interviews (Goldkuhl & Röstlinger, 1988). To increase the quality of the study, the authors have strived to create a apparent theme including validity, reliability, relevance, and generalization to increase the quality of the investigation and also to provide knowledge and understanding (Sandberg & Faugert, 2007).

The interviews were conducted through open dialogues and the material was transcribed in a rigorous way, which increases the authenticity and credibility of the study. The evaluation method for ensuring the quality of this study consists of validity and reliability processed by Sandberg and Faugert (2007). The validity in
this qualitative research is covered by authenticity and credibility, while reliability consists of accuracy, well-reasoned positions and arguments.

**Validity**

Validity means what is highlighted and analyzed in the evaluation to what is relevant for evaluation (Sandberg & Faugert, 2007). The authors of this study have sought to implement a good evaluation with high validity because a test with low validity is a study that has not examined or measured what it intended to measure. Validity is not related to the only actual data collection, it requires a holistic approach (Sandberg & Faugert, 2007). A data collection involves the validity if the researchers have succeeded in acquiring the material to make a credible interpretation of the analysis. This study presents a qualitative approach, the validity and reliability is assessed in a different way compared to studies with quantitative approach. The study aims to give as clear a picture of the reality as possible.

**Reliability**

Reliability in this study means the accuracy to describe that the data collection was done in a systematic and professional way, this means that this investigation can be made again and end with the same results (Sandberg & Faugert, 2007). Reliability is about accuracy and high precision; a low reliability means that the results are uncertain (Sandberg & Faugert, 2007). It is important that the selection of proposed method and the equipment used during data collection (interviews) is described, as this may give the reader an opportunity to determine the reliability of the results and their reliability. As mentioned earlier, there have been open interviews in this study, which promotes the integrity of the interviewer.

### 2.6 CHOICE OF DISCUSSION

The authors have chosen to perform six interviews with three different companies; NaviPro, Sogeti and Logica, where one company is local, another is national and the last one is international. In these six interviews, the authors interviewed five consultants (2+2+1) and one CEO. This choice was made because the authors wanted to create a broader and more general insight into how a CEO of a local company look at mobility and the problems that may arise when working mobile. The authors also attempted to interview the CEO's of the company Sogeti and Logica, but without success. The choices of the respondents have been based on their knowledge and the company's size. The reason why there was only conducted one interview at Logica is because the company is global and because the information that was gained from the respondent covered all the questions that were asked.

### 2.7 PRESENTATION METHOD

This report will be presented orally at a seminar with the help of a Power Point presentation in where the authors describe how they have conducted the study, and the results that the study has generated. The results of this study will lead to a textual description that has to be followed in order to avoid any implications that may arise in the consultants’ mobile work.
3 THEORETICAL STUDY

The theoretical framework is clearly linked to our research questions. Here we present theories concerning implications for mobility, enabling technology and social interaction from different author’s point of view. The chapter is meant to give the reader a survey of how the scientific debate about the substance is transferred. The chapter begins with a presentation of how the mobility is defined. The theoretical framework contains a justification of internal and external implications of mobility and social interaction. This chapter also focuses on the enabling technologies.

3.1 PREVIOUS STUDIES

The selected theory below treats earlier research and theory about Mobility, Mobile ICT, Mobile Technologies, Implication of mobility and Social interaction. In the section; Implications of mobility and Enabling technologies, previous authors are speaking of previous research, which outlines the implications contained in the consultants’ mobile work but also what technology can facilitate consultants’ mobile work.

For example, Ian and David Joseph (2003) emphasize that mobile workers will face implications in terms of longer working hours since the consultants will have the freedom to manage their own time from any location. Basole (2007) stress that mobility can contribute to many different challenges, and have presented a list of ten challenges. This particular section includes theory from; Schaffers et al. (2006), Benbunan-Fich and Benbunan (2007) and others. The section with Mobile technology presents a list of various enabling technologies that consultants use today, according to the different sources.

In the section on Mobile ICT, Awazu et al. (2009) emphasize that with mobile ICT companies are able to undertake innovative project, collaborate with other entities, test new ideas, share concepts and knowledge, and even bring innovation into the marketplace. Basole (2007) have also done a research on the subject and says that mobile ICT provide greater insight and visibility into enterprises’ resources and assets, which in turn create an instrumented enterprise. There is much more valuable theory and previous study in the section below.

3.2 MOBILITY

Working in a modern organization today means an increasing form of self-government, where more and more decisions are taken close to the people concerned, every individual takes responsibility for their own decisions and we are moving between different environments (Lindroth & Östlund, 2001). With the increased demand comes a higher degree of freedom as to how and where to work. The technology that supports this is also evolved, for example laptops are now a normal part of working, mobile phones are more and more an important part of our community while PDAs are beginning to show more and more (Lindroth & Östlund, 2001). The original meaning of “mobile” refers to the transformation or movement of an object, conditions or structure. The word mobile is very abstract and can be used in many different relations. If the word “working” is added then the concept discussion becomes automatically smaller because there is no general
definition of mobile working. Mobile working is a very subjective term that can be answered in many different ways by different people. According LaBrosse (2007) “A mobile employee is someone who is out of the office more than 20% of the week but is still working” (LaBrosse, 2007). The definition of mobility is not supposed to be of static nature. A constant evolution of mobility increases the ability to have access to the company and its consultants no matter the geographical location Gehmann (2009) defines mobility in a wider perspective, saying that

“If we understand the word mobility in a wider context, it becomes evident that it does ground upon another idea still more encompassing the one of movement; the latter representing an image deeply rooted in our occidental way of how to conceive world at all.”

(Gehmann, 2009, p. 51)

People are no longer tied to the office as much as before because the communicative interaction has increased. People/Consultants have become more available and regardless of location, new ways of working have arisen (Dahlbom & Ljungberg, 1998). Mobility is involved in all type of working according to Dahlbom and Ljungberg (1998). Office work is often described as stationary, but usually it involves local mobility such as short trips to the coffee machine, copier or other areas of the workplace. This type of mobility is defined as "wandering". The authors believe that you are mobile, even when working statically in the office because you often move around and do other things such as bringing new files, handing paper, instead of sitting still (Dahlbom & Ljungberg, 1998).

As a consultant, it is very common to travel, short or long distances by car or other vehicles and even this is a typical example of mobility, the authors, this aspect of mobility is defined as "traveling”. The third aspect is "visiting", which denotes the time you spend outside the office, for example, when a spends a few days to meet a client in another country or city (Dahlbom & Ljungberg, 1998).

Figure 2: Three modalities of mobile IT use (Dahlbom & Ljungberg, p.230, 1998)
According to Watson and Lightfoot (2003), the aim of mobile working is to allow staff to access a range of systems and services whilst they are away from the office but without restrictions of wires. Watson and Lightfoot (2003) emphasize that true mobile working should allow staff to access systems and services from any location (car, airplane, buss etc.). Lindroth and Östlund (2001) define mobility as:

“Mobility is equal to movement. Rather, it relates to the ability to move independently to what you to engage in. Mobility means different things depending on what context you see it in and how you approach the concept.”

(Lindroth & Östlund, 2001, p. 5)

The consultants must be fully self-sufficient and carry everything they need to communicate with their office at all time to achieve true mobile working. They should not rely on their location to provide anything. There has been a rapid increase in the use of computers, mobile phones and more appropriate services over the years, more recently; this has changed consultant’s way of work. It is not as usual to sit and work at one place anymore. According to Lindroth and Östlund (2001), the ability to work mobile comes with a number of advantages. One example is that you are not bound to the office, which means that you have the opportunity to sit in a different country or at home on the sofa and work from a distance. But it also means that you as consultant always are expected to be available and you can lose a lot of important social information such as in coffee breaks or meetings where knowledge sharing is often done (Lindroth & Östlund, 2001).

The above-mentioned pros and cons should be taken into consideration when developing systems to support mobile work. These relatively trivial aspects of mobile work are easy to predict without further analysis, but to get a good view; a more fundamental understanding is required for the concept of mobility and what mobile life entails (Lindroth & Östlund, 2001).

### 3.2.1 MOBILE WORKING IN A PERSONAL LEVEL

According to Basole (2007) there are different categories and profiles of mobile enterprise users. Here mobile workers are defined as “People whose jobs intrinsically require them to be out of the office or away from their desk conduct work at the point of action” (Basole, 2007, p. 3). Basole (2007) indicate that every enterprise has mobile workers and argues that there generally can be found six mobility “profiles” in a typical enterprise. The profiles are divided in two categories, on-site and off-site as showed in the figure below, the first category consists employers working manly on-site, consisting “Desk workers”–workers who work mostly behind their desks (e.g., software designers, researchers), “On-site rovers” – workers who work mainly at their desks but sometimes in other areas in the company (e.g., administration assistants) and “Site wanderers” – workers that are more desk-less and who spend most of their time roaming in different areas in the company (e.g., IT troubleshooter, nurses, doctors) (Basole, 2007).
The second category on this figure is consisting of workers working mainly off-site, such as “Teleworkers” – workers that work from home or away from the office most of the time (e.g., Analysts, stock traders). “Off-site rovers” – workers who work mainly away from their offices, but sometimes at their desks (e.g., consultants), “Road warriors” – workers who work mainly outside the company (e.g., account executive). “Global cruisers” – workers who often travel between different companies, customers of locations (e.g., corporate executive) (Basole, 2007).

3.2.2 MOBILE ICT

The World Bank (2011) describes ICT as “information and communication technologies, which consists of the hardware, software, networks, and media for the collection, storage, processing, transmission and presentation of information (voice, data, text, images), as well as related services” (The World Bank, 2011a). Axtell et al. (2001) emphasize that mobile workers use ICT in their work, when the work involves some level of knowledge intensity and communication with others, either internal or external to the organization. Information and communication technologies facilitate the mobile work when consultant spend time traveling or working from different locations (Axtell, et al., 2008, p. 908).

With mobile ICT companies are able to undertake innovative project, collaborate with other entities, test new ideas, share concepts and knowledge, and even bring innovation into the marketplace (Awazu et al., 2009). Mobile ICT tools can be used in order to learn how customers use different products and services by collecting demographic usage and similar data, with mobile ICT companies can “mine” customer’s databases to identify and target the customers. Awazu et al.
also emphasize that ICT does not only facilitate communication between people thus strengthen the organizational structure since ICT makes it possible to rearrange activity schedules and is going towards “real-time” operation with greater flexibility in both private and professional spheres (Aguiléra, Guillot, & Rallet, 2012). Basole (2007) emphasize that mobile ICT provide greater insight and visibility into enterprises’ resources and assets which in turn create an instrumented enterprise (Basole, 2007).

“Research shows that investment in information and communication technologies is associated with such economic benefits as higher productivity, lower costs, new economic opportunities, job creation, innovation, and increased trade and exports. Information and communication technologies also help provide better services in health and education and strengthen social cohesion”

(The World Bank, 2011b, p. 5)

Awazu et al. (2009) accentuate that more powerful and faster ICT will help companies to “leverage design, testing and refinement capabilities and well adapted ICT applications will enable better business practices” (Awazu, et al., 2009, p. 54). The authors also stress ICT will support the transfer of products and services from within the organization to external stakeholders and customers (Awazu, et al., 2009). According to Awazu et al. (2009) ICT can facilitate the collaboration and exchange of ideas, bring new innovation ideas to organizations and to refine existing products and services. ICT functions can transform innovation processes into more interactive collaborations. However, in order to ensure successful ICT adoption, CEOs will have to carefully consider which ICT strategies will best fit their organizational goals, management structures and customers in order to gain competitive advantages (Awazu, et al., 2009).

3.2.3 MOBILE WORKING IN AN ORGANIZATIONAL LEVEL

Basole (2007) emphasize that more and more organizations are realizing the tremendous potential that mobile ICT can offer. Today’s employees can work at home or work in the field without constituting the mobile enterprise and the great potential that mobility offers have led to tremendous opportunities for consultants. The ability to access to the recourses anywhere and anytime is one of the main benefits of working mobile in a organization (Basole, 2007).

According to Basole (2007) in the early 2000, when many organizations began to evaluate and adopt mobile ICT solutions, the technology often failed to deliver what was expected from it, this often caused delays, failures and disappointment. Many believed that ICT would be yet another bubble that will burst sooner or later. Today much has changed. Today’s technology is immensely better than it was ten years ago, it has improved significantly. There is a lack on uniform definition and approach, which leads to different views of the mobile organization. The picture below contains different attributes that define different views of mobility in an organizational level.
Some claim that the mobile organization is narrowly and tactically, where point solutions play the greatest role. These projects focus primarily on productivity improvements and cost savings. Others claim that mobile organizations are broader and more strategic. The author argues that the focus is on the strategic and large-scale organization implementations that enable organizations to create new skills gain and maintain competitive advantage and find new markets (Basole, 2007). Mobile ICT has led to adapting organizations, a consultant business with empty offices is a sign that the company is doing well, because it normally means that they are in the clients’ office working close to them. A consultant that only is sitting in his office is shows a sign of not getting any job/mission from his clients (Basole, 2007).

3.3 MOBILE TECHNOLOGIES

The introduction of Internet and the proliferation of new advanced mobile and collaborative technologies have played an integral part in many organizations over the past years, helping organizations to bring the best mobile working solutions into the business and in the way they operate thus enabling anyplace and anytime work. Axtell et al. (2008) indicate that office professionals now work remotely 50-90% of their working time, resulting in the need of different mobile technologies, ICT solutions and workspace innovation in order to support mobile professionals (Axtell, et al., 2008; Schaffers, et al., 2006). With mobile technologies consultants are able to work anytime despite the location, have instant access to the latest information and access the company’s customer database regardless of time and place (Ian & David Joseph, 2003).

Mobile technologies enable the employees with the feasibility to manage their own tasks and keep up to date with e.g. e-mail, calendar, as well as stay connected to the business without having to work from the office. Customers can also have access to Internet from different places by using their laptop or other mobile technologies that in turn lead to better communication and productivity for the company. Due to the introduction of new mobile technologies into consultants working environments, employees now have higher demands on the organization, they now want to have access to the same systems, software and services they use when they are in the office as well as when they work outside...
the office. The same access consultant’s have from their desktop PC should also be accessed from the laptop, PDA’s or smartphone (Ian & David Joseph, 2003). “Mobile communications devices and applications are primarily designed to increase efficiency and productivity for professionals on the go” (Smith, 2005, p. 84). Bowden et al. (2006) argue that the ability to capture store and reuse information by mobile user is now commonplace. The authors further emphasize that the recent advances in technology have increased the performance and reduced the price of many mobile computing devices, since mobile technologies can facilitate a reduction in construction time and capital cost (Bowden, Dorr, Thorpe, & Anumba, 2006).

Ian and David Joseph (2003) underline that the aim of mobile working is to allow employees to access a range of systems and services whilst they are away from the office but without the restrictions of wires. Furthermore, the authors underline that true mobile working should allow employees to access systems and services from any location e.g., from the car, on a train, from a community center or temporary hut that does not have telephone line or mains electricity (Ian & David Joseph, 2003). However, the authors argue that in order to achieve true mobile working, consultants must be fully self-sufficient and carry everything they need to communicate with their office and the outside world with them. They should not rely on their location to provide anything (Ian & David Joseph, 2003, p. 348). Torkzadeh and Doll (1999) argue that in order to increase mobility and enable employees to have their office in their pocket, consultants should use suitable mobile technologies since they are used in a way that not only have great impact on people ways to work, but also affect the productivity and effectiveness of the company (Torkzadeh & Doll, 1999). It is generally believed by Torkzadeh and Doll (1999) that technological improvements are a major source of future economic growth for companies and consultants’ mobile work.

3.3.1 ENABLING TECHNOLOGIES

There are many different types, styles, and models of mobile technologies available on the market today enabling the consultants’ mobile work. The range of e.g. mobile phones to smartphones and mobile broadband are all influencing the consultants’ mobile work in different ways, helping to improve the productivity and effectiveness. The enabling technologies mentioned below are the most common technologies.

<table>
<thead>
<tr>
<th>Tools</th>
<th>Explanation of tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile Phones</td>
<td>A mobile phone is a device that can make and receive telephone calls over a radio link from different geographic areas, this by connecting to a cellular network provided by a mobile phone operator, allowing access to the public telephone network (Australian Science, 2011)</td>
</tr>
<tr>
<td>Laptops</td>
<td>A laptop is a smaller version of a PC, which consists of a flat screen and keyboard in one portable package, with laptops you are able to do anything that a desktop PC can do. The laptop has the same components as a desktop computer, including a display, a keyboard, a pointing device (a touchpad, also known as a trackpad or pointing stick) and speakers into a single unit (DTI, 2004).</td>
</tr>
</tbody>
</table>
**IMPLICATIONS OF MOBILITY**

The proliferation of mobility and the way organizations utilize the latest mobile technology to make their business more productive regardless of time and place, create higher demands on the mobile workers and their working environment. The use of mobile technologies will also give rise to different implications and challenges since mobility requires that organizations obtain a clear understanding of user behavior in a mobile environment that ensure successful interaction with the employees and the customers (Benbunan-Fich & Benbunan, 2007). Therefore organizations need to have fresh insights of mobility associated with different mobile technologies in order to allow their employees to access a range of systems and services from any location without restrictions of wires (Ian & David Joseph, 2003). Although mobile working can provide benefits in terms of a more dynamic and connected working environments, provide employees with greater flexibility and foster more spontaneous interaction and collaboration, mobile workers will

<table>
<thead>
<tr>
<th>Technology</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smartphones</td>
<td>A smartphone is a mobile phone built on a mobile computing platform, thus with more advanced computing ability and connectivity than a feature phone. The smartphone include features of the mobile phone with more functionalities as mail handling, calendar functionality and access to Internet (DTI, 2004).</td>
</tr>
<tr>
<td>Mobile Broadband</td>
<td>Mobile Broadband is the wireless Internet access through a portable modem, mobile phone, USB Wireless Modem, or other mobile devices. The mobile broadband can be used anywhere where portable computer and network is available (DTI, 2004).</td>
</tr>
<tr>
<td>Remote Access</td>
<td>Remote access is the ability to get access to a computer or a network from a remote distance. Remote Access allows connectivity to all corporate business systems, e-mail, calendar, etc. and it requires access to the Internet (DTI, 2004).</td>
</tr>
<tr>
<td>Videoconference</td>
<td>Videoconferencing enables distance meetings and the ability to interaction by set of telecommunication technologies which allow two or more locations to communicate by simultaneous two-way video and audio transmissions (McGew, 2012).</td>
</tr>
<tr>
<td>Teleconference</td>
<td>A teleconference is the live exchange and mass communication of information among several persons and machines remote from one another but linked by a telecommunications system. Teleconference enables distance meetings between several parties in which the meeting is done from separate phones (Davis, 2008).</td>
</tr>
<tr>
<td>Net-Meeting</td>
<td>Net-meeting enables computer screen sharing with one or more participants using Internet as transmission medium. The product is developed by Microsoft Corporation and supports VoIP, chat sessions, a whiteboard, and application sharing (Watkins, 2012).</td>
</tr>
<tr>
<td>PDA</td>
<td>PDA stands for personal digital assistant, a handheld device with an increasing amount of power. Through the use of PDAs you can work on documents, spreadsheets or other files from the office. Many PDAs also double as mobile phones and can be linked to laptops for wireless Internet access (DTI, 2004).</td>
</tr>
<tr>
<td>VPN</td>
<td>A virtual private network (VPN) is a secure way to give remote access to networks, to other offices or individuals as VPN uses the Internet and encryption technology. The use of VPN is extremely secure, widely accessible and users can access the actual network, which means the users always have the most current data (DTI, 2004).</td>
</tr>
</tbody>
</table>
also face several implications when working mobile and with different portable devices as well as telecommunications facilities (Rungta, et al., 2008). According to Ian and David Joseph (2003) mobile workers will face implications in terms of longer working hours since the consultants will have the freedom to manage their own time from any location. The authors also argue that home working could result in extended working hours since the mind is not entirely focused which in turn can lead to higher level of stress (Ian & David Joseph, 2003). The lack of social interaction is also one implication of mobility whereas employees feel that they don’t have anyone to talk to, drink coffee with, communicate or ask questions regarding different tasks or problems that can occur outside their office. This mobile implication will require higher level of communication. Another implication is limited access to resources and constrains in technological devices and services, for example cell phones are harder to use outside the office, since it has a smaller screen and the keypad layout can be difficult to manage, compared to traditional computer environments. Therefore, mobile workers should be familiar with the technological environment when working outside the office. According to Basole (2007) and Kurkland and Bailey (1999) mobile working can contribute to challenges such as:

- Less office performance
- Less social interaction with colleagues and others
- Limited access to resources
- Social and professional isolation
- Reduced office influence
- Longer working hours and higher level of stress
- Consultants can feel empowered by mobile working
- Mobility can cause lack of secure information
- Hard to distinguish between work and family balance
- Expense account changes i.e. mobile phone charges, remote connection charges, teleconferencing costs, video conferencing costs etc. (Basole, 2007; Kurkland & Bailey, 1999; Schaffers, et al., 2006)

If organizations are able to identify and face the different implications in the mobile working environment as well as in their use of different mobile technologies, they can ensure market success and meet the customers’ needs much easier (Benbunan-Fich & Benbunan, 2007). In order to gain flexible mobile working, companies have to address the risk that s can feel isolated, unaware and not engage in the process when working mobile (Schaffers, et al., 2006).

Figure 5: Illustrate how implications of mobility affect social interaction and mobile technologies
3.5 SOCIAL INTERACTION

Social interactions are mutual acts that are oriented towards us. The concept involves a form of communication between two or more people and it can be done through any type of technology but also face to face. According to Gillespie (2006), the social psychologist Mead from Chicago is considered as the founder of social interaction theory. The concept of interactionism is first used in 1938 by Mead’s student sociologist Blumer. Symbolic interactionism, a qualitative methodological approach arose in the U.S. in the early 1900s, and grew partly out of the Chicago school. Along with entomology and grounded theory had its breakthrough in the 1960s (Gillespie, 2006). A social interaction is for instance, when two consultants have an e-mail conversation with each other, or when two organizations deliberately try to outcompete each other. It’s about a mutual subjective orientation toward each other. Below is a definition of social interaction according to Oseland, Marmot, Swaffer and Ceneda (2011):

“If a person responds to the information, or if the same or other information is exchanged between two or more people, then an interaction has occurred; the idea of a two-way effect is essential in the concept of interaction, as opposed to a one-way causal effect”

(Oseland, Marmot, Swaffer, & Ceneda, 2011, p. 3)

A social interaction is the activity between two or more people affecting each other, it’s about sharing views and challenging the views of others in order to test and improve the knowledge of a subject (Oseland, et al., 2011). The main purpose of collaborating and working together is to further extend the knowledge (Heerwagen, Kampschroer, Powell, & Loftness, 2004). According to Scheinkman (2005) “social interactions refer to particular forms of externalities, in which the actions of a reference group affect an individual’s preferences”. It often depends on the context. Social interaction is the key to organizational effectiveness in an increasing number of work contexts – from service and policy-making organizations to scientific research and development groups (Heerwagen, et al., 2004).

Figure 6: The interaction cycle (Oseland et al, p.52, 2011)
There are a lot of disadvantages and consequences of flawed interaction and Banita and Yogesh (2009) have quoted following: “In the long-term, as face-to-face interaction becomes less frequent, the implications become deeper, with home workers feeling disconnected from both their jobs and co-workers” (Banita & Yogesh, 2009, p. 1).

It’s hard to doubt that social interactions are an important aspect of working life. Lack of enough social interaction can have big consequences for both people in an organization and for the organization as a whole (Tschan, Semmer, & Inversin, 2004). Social interactions are increasingly important for job satisfaction and regularly appear among the facets of job satisfaction measures. In addition, social interaction is very important among the conditions considered important for work motivation and organizational commitment. It has also been shown to be important and very determinants of various aspects of performance, including behavior, lack of consistency, errors and organizational citizenship, so it therefore play a big role for individual well-being as well as for the overall performance of the organization (Tschan, et al., 2004).

According to Tschan et al. 2004 two type of social interactions can be distinguished at work: the author discusses task-related interaction as the interaction between two or more people when accomplishing a task. Examples are developing a system with a colleague, treating a patient as a cooperative act between a doctor and a nurse or working on a project together with a colleague. The second one is private interactions, which is interactions that contain “private” aspects such as telling a joke, or chatting about technology. A private interaction is often about interacting in a more informal way and talking about current events that are not necessarily related to the task, such as: What are you doing tonight or How was your weekend (Tschan, et al., 2004).

“Private interactions at work should generally be more pleasant and satisfactory than task-related interactions. Private interactions at work are also expected to contain a greater amount of personal information than task-related interactions. On the one hand, this is due to the very concept of task-related and private interactions at work. On the other hand, many consider some of their colleagues to be friends as well, and interactions with friends have been found to be both more satisfying and personal”

(Tschan, et al., 2004, p. 2)

All interaction that goes beyond a few words is more task-related than private-related interaction. In most offices the unwritten rule is not talk with colleagues as long as it’s not a coffee break or a lunch break. Many offices are decorated with a so called open-office environment, which is good because you can just turn your head left or right if you want to talk to a colleague. It is much worse if you have a closed office because you have to go out of the room or let someone in the room for it to be a face-to-face communication. This can be beneficial for people who want to be for themselves or like to work in a quiet environment, but can be very depressing and sad for people who like to communicate or want a more social environment. Private interactions at work should be more discretionary than task-based interactions because, you cannot always work with someone you like. There
will be occasions when you have to work with someone you do not like or someone you do not come on so well with and then you still have to solve the task. Working with someone you do not like can lead to less productivity and less efficiency because lack of motivation to perform the work. A good result is usually a result of something you enjoy doing but you can do a good job even if you do not think its fun. Sometimes you can even be more effective when you work with someone you don't like because there is less talk and more work done, for example, if two software engineers who don't like each other, develop an IT system they will surely choose to develop in different places because they don't like each other or have anything in common, one might work from at home while the other one work through the office. The disadvantage of this way of working is that the work will not be so tight and will lack a common theme. There is also a high risk of communication errors and extra work due to misunderstanding while the advantage is that the work gets done in a good way, often well before the deadline (Tschan, et al., 2004).

3.5.1 INTERNAL INTERACTION

A consultant in a company has different types of interactions, both internal interactions and external interactions. The internal interactions are done between colleagues through natural interaction where they share knowledge and ideas on different things. The advantages of internal interactions are that they have all the equipment needed to perform their job, but also that they have colleagues they can talk with, share ideas with and ask for help. The disadvantages are that they can become less productive despite all the technological assets, because of the great opportunity of talking to colleagues. There have been numerous studies about internal interaction and how it affects various workers; recently a study showed that workers spend between 20 and 35% of their time in interactions with colleagues (Heerwagen, et al., 2004). According to the study a large amount of the interactions tend to be unscheduled and occur in many locations, including hallways, individual workstations, doorways and near central resources (Heerwagen, et al., 2004).

“Brief interactions can be both intentional (looking for a specific person with whom to talk) or unintentional (running into someone in the hallway). They are largely information exchanges, but also include interactions that support the development and maintenance of collaborative relationships”

(Heerwagen, et al., 2004, p. 5)

According to Heerwagen et al. (2004) many studies have shown that face-to-face communication is the most common form of internal interaction and communication in a variety of work settings. He also argues that it is found that managers spend about 60% of their time in face-to-face interactions, and professional workers spend about 25–30% of their time, which is quite a lot. Interactions often occur in or near personal workstations and on well-trafficked corridors. The internal interaction can be flawed if you work at a job where you don't like or know anyone, therefore it is very important to spend quality time and energy on improving the internal interaction in the company and have it as a
starting point before offering services to customers. It's about being concerned about the internal staff and treating everyone with love and respect.

“‘Homebaseworking’ involves individuals undertaking traditionally office-based paid employment from home by means of information and communications technologies (ICTs) on a full- or part-time basis, from their traditional work environment and colleagues and, to some extent, their social environment. As a result of this remote style of working, home workers are presented with fewer opportunities to engage in face-to-face social interaction with colleagues”

(Banita & Yogesh, 2009, p. 1)

3.5.2 EXTERNAL INTERACTION
The external interaction occurs between customers and others outside the company; it is an interaction that involves mobility and communication with customers. The advantages are that the consultants usually are free to work wherever they desire and that they get closer to the customer because of opportunity to work in their offices. The disadvantage is the lack of social interaction with colleagues. Banita and Yogesh (2009) indicate that when informal face-to-face interaction becomes irregular, the implications for home workers are generally depicted as being negative, which can lead to a variety of unfavorable implications for the individual. Banita and Yogesh (2009) further argue that the external interaction can affect the feelings of an employee; he/she can miss some “very important” information by not being in the office.

“It is suggested that when working remotely, the distribution of information amongst workers results in home workers feeling “out of the loop”, with home workers missing out on informal, interactive learning concerning the latest developments within their company. Furthermore, the quality of the relationships between home workers and their colleagues deteriorates resulting in hindrances in the communication and cohesion amongst workers and home workers feeling like outsiders when visiting the traditional office space”

(Banita & Yogesh, 2009, p. 4)

The external interaction is influenced very much by the technology we use. The technology is based on and has set the level of the extent of communication. Now it has been so much progress in the development of technology that it has affected the social interactions. One can communicate with different extents depending on what kind of mobile phone. If we compare this to ten years ago, when it wasn’t as normal to use cell phones and computers (with software that the opportunity for joint interaction) as it is today, back then, customers didn’t require as much by the s as they do today. This is because the development has increased tremendously and we have more opportunities today than we had ten to twenty years ago. For example: ten to twenty years ago, when a customer contacted a consultant they expected response (by email, mail, text message) within the next/same week, because of today’s technology, customers now expect the consultants to be available and respond within a few minutes.
CASE STUDY 1

This chapter gives a presentation of the interview companies and all consultants that participate in this study. It gives an insight to the interview answers and knowledge gained from the first interviews. The chapter is structured with a brief background of the company, a background of all consultants in each company and the significance of mobility and mobile technology.

4.1 CASE 1: Sogeti

4.1.1 BACKGROUND

Sogeti is a leading provider of professional technology services, specializing in Application Management, Infrastructure Management, High-Tech Engineering and Testing. Sogeti is a consultant company with the goal of being a global company that exists in large parts of the world. Their aim is to be able to provide various IT services at a local level, so the company can be near their customers. Sogeti is a wholly-owned subsidiary of Cap Gemini S.A., listed on the Paris Stock Exchange, and have about 20 000 employees in 15 countries of these, approximately 1150 s at the company's 21 offices in Sweden (Sogeti, 2011).

Mikael Lindberg

Mikael’s general role in the company is to work as an IT consultant, but his daily tasks includes software development, programming, architectural issues. He has many years of experience in the field but has worked in the company since August 2011 and is also responsible for the competence developing in Sogeti in Borås. Mikael Lindberg has worked as a mobile consultant all the time during his professional career and he enjoys the possibility of not being tied to any office or workplace.

Peter Arvidsson

Peter is working as an IT-consultant; his general role is to work with project management and IT-architectural assignments. He has many years of experience in the field but has only worked in Sogeti since October 2011 although he has worked in Cap Gemini for several years. Peter has always worked as an IT-consultant but he has become more mobile in recent years.

4.1.2 MOBILITY

When asked what mobility means to Mikael, he answers that it really means not being tied to a physical place to fulfill his tasks. Working mobile is also about having your phone accessible at all times so the customer can reach you at all time depending on what they have agreed earlier. He says that another aspect of mobility is when you have customer contact outside normal working hours or when you are able to talk to customer A, when you are helping customer B at the same time. When we asked Peter what mobility means to him, he said: “It means being able to do everything I do in the office no matter where I am. I can sit in the office, at home or in China, location or time should not be an issue” (Peter Arvidsson, 2012-03-06).
According to Mikael, he enjoys working as a consultant and his desire to be mobile could not be better, because he has all the technical conditions he needs. He can sometimes experience that a specific assignment has limitations of mobility and can narrow the possibilities for him to be mobile, but he is always striving to be more mobile. Mikael considers himself to be very functional and effective when he is working outside the office, he has never experienced any reduction of efficiency when he works mobile, in fact he stress that he is more effective outside the office, especially at home, where he can put eight hours of 100% dedication on a customer. He says that he can’t be 100% efficient in the office since there is a higher level of interruption by colleagues with non mission-specific questions that he has to answer. He says that sometimes it’s very difficult to be 100% focused at all times during the eight working hours in the office, especially when you are sitting with heavy computing implementations, therefore it is very important to take small powernaps, having a coffee or interfere with other colleagues. This is one of the disadvantages of working in the office, but at the same time this is also a part of the job and not something that can be avoided.

Mobility is very important according to Peter. He cannot see himself working in the office from eight to five every day. The possibility and freedom of working wherever and whenever is the key to success for a consultant. You set your own working hours, which leads to comfort and efficiency. According to Peter, the grade of mobility in a consultants work depends entirely on the commission, different projects require different types of mobility. For example, if you’re sitting in a developing project with ten people who are working together, then it should be in an open plan office. Peter believes that these kinds of jobs are very difficult to accomplish by working from home it doesn’t matter how good tools you have. This cannot replace the face-to-face interaction, especially when problems and difficulties occur.

When asked how much downtime consultants can take advantage of by having access to corporate resources around the clock, Peter Arvidsson answered that he have access to corporate resources at all times: “I have the opportunity to check my emails at night if I need to. There have been times when the e-mail alert on my phone has been ringing nonstop, even at nighttime and that can be frustrating when you have a private life. I think we should maintain the distinction between private life and professional life, it is very important. Sometimes it happens that I go home earlier from work and decided to work in the evening instead, at those moments there are high requirements for me to be reachable all the time” (Peter Arvidsson, 2012-03-06). Peter also emphasize that he usually set up his smartphone so that it doesn’t ring in the evening because he thinks this should only happen in the daytime, he also prefers to get all his e-mails in the office instead.

The disadvantage of mobility is that it can be very stressful for many because the phone can ring non-stop sometimes. Peter believes this can lead to addictiveness because you have to check your phone regularly, if it has any missed calls or new e-mails. Nowadays it is increasingly common that private and professional life intertwine says Peter; this means that the normal 8-17 hours disappear more and more. It’s very good because it gives the opportunity to allocate time and that’s one of the main advantages of mobility. Mobility does not necessarily mean that
you have to go to a specific place to work; it can mean that you choose to change your working environment to become more efficient. The great thing about mobility is that you don’t have to waste time on the road in order to start your job, you can just fold up your computer at home and get started directly. Mikael stress that thanks to his ability to have the discipline to sit at home and work, he get things done much faster, but some people like to postpone their work and they are not advised to work mobile. When asked how much time they will benefit from working mobile, they said that they earn about one hour per day because they don't have to go to work and that they do not have to talk to colleagues and answer irrelevant questions.

When asked what they think is the biggest difference between working mobile or in the office. Both Mikael and Peter say that the social interaction with colleagues is the biggest difference. Lack of social interaction is the main disadvantage of mobility although some consultants can experience some lack of efficiency; they believe it is a personal matter. “There can be a lack of social interaction with colleagues and working at home can sometimes prevent you from having a dialogue with your colleagues. I believe social factors are the main disadvantage” (Mikael Lindberg, 2012-03-06). “The social interaction is the main disadvantage of mobility, to socialize with colleagues is very important” (Peter Arvidsson, 2012-03-06).

4.1.3 MOBILE TECHNOLOGIES

There must be a technical infrastructure that supports that you can work remotely. To be able to work mobile, it is very important to have good security, connectivity, web-based transportation systems and VPN solutions. Then it is also very important to establish the right communication channels on the personal level very early in a job mission to be able to work efficiently with good cohesion. “We at Sogeti are using strong hardware solutions to reach our customers environment, we have the opportunity to reach them through PC and smart phones and this allows us to access all their internal environment” (Mikael Lindberg, 2012-03-06).

Many customers want help with the entire value chain, everything from developing a solution to implementing, installing and configuring it. But this can differ very much depending on how much freedom the consultants have in the customers’ business environment. Sometimes you can get a mission where you have to deliver a full packaged solution together with installation and configuration documentation, before they take over. This often occurs in companies where they don’t let the consultant in their operating environments says Mikael. The technologies differ greatly from customer to customer. We use different tools depending on what the customers need. “We have very defined procedure descriptions, process descriptions and high safety approaches for mobile access” (Peter Arvidsson, 2012-03-06).

It is the customer that determines how the development will occur according to Peter. Sogeti have many tools for mobile working according to Peter, some of them are remote access, VPN devices, intranets, videoconferencing, teleconferencing, mobile phones, smart phones and the outlook calendar through the phone. The calendar is also extremely important, especially when planning meetings. Skype is also something we use, especially when discussing with other
colleagues says Peter. When asked which one of the technologies above they use the most, both answered: My smartphone is very important; it is like an anchor around my neck. My laptop is also very important. I see my smartphone as a toolbox and my laptop as my car. “If we pair the last three tools (Videoconference, Teleconference, Net Meeting), then we currently have three different tools, Microsoft tools such as Office communicator, live meeting, which we call a global tool that have been merged. But we will probably move to Lync from Microsoft in the future because it contains all the elements, which is fantastic. But our official tool here at Sogeti is called GIMS+ it is our own, and it is a merging of Microsoft Office communicator and Microsoft Live meeting. Besides these, I personally use my smartphone and my laptop the most” (Peter Arvidsson, 2012-03-06).

It is important to distinguish between what a smartphone is and what a computer is. A smartphone can be very useful and contribute in many things but it will never be a computer. The smartphone will do what it does best; simple things and it will guide and assist its user by managing data and communications.

4.2 CASE 2: NaviPro

4.2.1 BACKGROUND

NaviPro is an IT consultancy company founded in 1999, with headquarters in Borås. Today, the company consists of 18 employees, whereof tree working in Stockholm. NaviPro’s main goal is to deliver business applications to small and medium sized enterprises, based on the ERP system Microsoft Dynamics NAV – also known as Navision. The company works with everything from analysis, implementation, training, support and they currently work with companies in manufacturing, and customer order-driven companies and several customers are in the textile and fashion industry. Together with their customers they make requirements analysis and then the company develop custom solutions based on high standards of an advanced logistics and production management. NaviPro only work with well-established suppliers, such as Microsoft Business Solution, MS Office, and Windows software for clients and servers. Their computer and servers are from Hewlett Packard and the software from Citrix. NaviPro believe that long term relationships, dedication and close cooperation will help the company to develop business processes and add value for the customers (NaviPro AB, 2012).

Thomas Molin

Thomas Molin is the CEO of NaviPro. He started at NaviPro in 2004, five years after the company was founded and has a very wide background in IT and consulting, based on previous experience and work. Thomas Molin is in charge of the whole organization and the total management of the company, he is everything in every way, with responsibilities as a decision maker, leader and a manger etc. Thomas Molin main focus is the market and taking care of old customers and thus finding new ones.

Anna Ekdahl

Anna Ekdahl has worked at NaviPro for eight years as an Application Consultant, with background as an economist. She has an extensive experience in IT and her main role in the company is to provide specialized consulting services to assist
customers when they buy new business systems. Anna Ekdahl also work with programming, developing simpler system and implementation, she participate in different projects and planning sessions, facilitate different costs and VAT rules based on the projects, making follow ups with customers as well as answering different support questions. Anna Ekdahl has worked mobile for the past five years, since 2006. She started to work mainly at the office but as she developed and started working with her own customers she began to work outside the office more and more depending on the customers.

**Teo Barbu**

Teo Barbu, is a former IT manager, he has worked at NaviPro since 2005 as a business system developer and a consultant. Teo’s main responsibility in NaviPro is to help customers with everything and provide appropriate up-to-date solutions and develop business systems based on set requirements, time and costs, that will meet the customer’s needs. Teo’s primarily office is home; he is only in Borås every two weeks. Teo has worked mobile since 2007; his previous work was mainly from the office with access to cell phone and computer.

**4.2.2 MOBILITY**

Mobility is a big part of NaviPro and the consultants’ daily work. By working mobile the employees have the opportunity to do their work both at home and outside the office and still offer high-quality solutions for their customers. The consultants’ mobile work is primary based on the customers, since they decide how accessible the want their consultants to be based on different situations, the tasks as well as the location. If the customer requires that the consultant must work face-to-face, they have to be accessible at first hand. But with mobility the consultants are not tied to a desk, an office or a location they have access to the business information they need 24/7 regardless of location, meaning that they can be according to Thomas Molin, more productive today than ten years ago with the company’s broad range of different devices.

Thomas Molin underline that the company doesn’t force any of their consultants to constantly be reachable or work mobile or at the office, it depends on the situation and the customers, the consultants themselves decide how they want to work. When asked what mobility means for the consultants, Teo Barbu answered that “Mobility means everything to me, because I only work mobile, my primary office is home” and Anna Ekdahl answered that mobile working means that “I can do my job both at home and outside the office, together with our customers in a good way”. Teo underline that “Mobility is the freedom under your responsibility”. He argues that consultants have to be much disciplined when working from home, you know what you have to do and it has to be done on time and within the right budget. The freedom of mobile working according to Teo means that you cannot blame someone else for your bad work or progress; mobility is not a 9-5 job.

Thomas Molin emphasize that the main advantages of working mobile is that you can work where you are regardless of time and location, whether it is at the office or in the car. Anna Ekdahl implies that the main advantage with mobility is that you can meet your colleagues and interact. By working at the office you have your own desk with full connection and no restriction in technical advances. If you have a problem the company’s technician can help you to fix different problems. If you
instead work outside the office and have technical difficulties you have to hire a technician to fix your problem, and that can take a long time. If you work at the office you can discuss different tasks and problems with your colleagues. The main advantage with mobility according to Teo is that he can be more effective when working from home, and he further implies that the disadvantage with mobility is less social interaction.

According to Thomas Molin, mobility and the technical development they have today have made it easier to meet the customers and make them more satisfied compared to five years ago. In the past, consultants had to work only from the office in order to connect to a client, due to limited access of technical advances. Now, NaviPros’ customers can get the right help and support regardless of time and place and through the right technical resources. However, Thomas Molin underline that the difficulty with mobile working is for the consultants to know when to actually take charge for the service they offer when taking calls outside working hours, in the car or at home. Mobility means that the consultants are almost always available for their customers and Thomas Molin stress that it’s very important to distinguish personal and working life in order to success. He further argue that the services NaviPro offered ten years ago are now very different since the consultants have all the technical advances and the support they need to work remotely or from home and still make a great job.

When asked if mobility affects the consultants’ efficiency compared to five years ago, both Anna and Teo agreed that working mobile mean that they can work more efficient compared to five years ago. Teo underline that “the problem of working in the office is that you have to interact, be social with your colleagues who in the end take your working time”. He further argues that when you work from home you don’t face unnecessary interruption by colleagues in the same way if you would work remotely. Teo stress that he personally prefers to work mobile, he is 20% more effective when working mobile, but of course he argues that it's good to meet colleagues, be social and interact or else you will end up feeling lonely.

Anna Ekdahl also consider herself be more effective when working mobile since working outside the office is more intense, consultants have more possibilities to perform different tasks and work in different places, since location no longer matters as much as before. She underlines that “when you work at the office you have to interact with your colleagues and you face more interruption in your work by a phone or other things”. Anna Ekdahl consider herself to be 40% more effective when working mobile, she can save more time by working from home, because even if you work from home you don’t take breaks in the same way as in the office, if you take a coffee break at home, it can still be by the computer, where you continue to do your work. If you had been at the office you would probably have to interact with your colleagues and you will end up losing working hours. Mobility means that Anna can save one hour every day, since she doesn’t have to travel. Teo will also save one hour a day by being mobile, he argues that he loses more time in the office due to social interaction, “it takes time to interact with each other at the office, I don’t earn any time by working in the office” (Teo Barbu, 2012-03-11).
The main changes in efficiency through mobility is according to Anna that we have now become more effective, we can now do our work and different tasks everywhere and on the go e.g. in the car, the train at a coffeehouse. Mobility has increased consultants effectiveness by 60% whereas Teo think that mobility have increased consultants efficiency by 20%. By working mobile Anna can save 30 minutes of free time per day and Teo can save 180 minutes per day.

Thomas Molin believes that mobility can slightly affect consultants working hours, because the freedom to work anywhere affect that fewer consultants have to work more today. But he stress that consultants have become more efficient and more productive through mobility. “We deliver more value / unit compared to what we did five years ago”. Both Anna and Teo consider that the working hours per consultant have increased over the past five years. The working hours are constantly increasing since the company has more and more customers and it’s difficult to find the right people for the specific task. In the last two years, consultants have more work do to, resulting in longer working hours. This can according to Anna be hard to notices since many of the s work remotely, outside the office.

Thomas Molin argues that the travel time per consultants has reduced through mobility over the past five years, consultants don’t have to travel in order to meet the customer, and instead they can now do their work regardless of location. With mobility we are now able to “go online and help the customers in a distance, we have the possibility to connect us and take over the customer's desktop, see what they're doing, what's happening, and correct any problem or if things go wrong etc. Ten years ago we had no choice, we had to go to the customer, to their office and help them face to face” (Thomas Molin, 2012-03-11).

Anna believes that the travel time per consultant have increased, since consultants have to travel more compared to the past years, and because mobility means that you are not tied to the office. Teo on the other hand believe that the travel time is the same if not decreased, through mobility he can work from home mostly of his working time. Anna also implies that the main advantage with mobile working is that you can save time by less travel to work she explains: “It takes 30 minutes for me to get to work. When you work mobile, you can be more free, I can take my break whenever I want to and I feel less interruption in my work”. But Anna also emphasize that the freedom of working mobile can sometimes lead to longer working hours, since you have a deadline. Mobile working can also mean more pressure, “You have the pressure to constantly show progress and development. If the results of mobile working are negative, then there is some sort of problem with this method of working”. But Anna argues that mobility is all about discipline, how you are as a person and it is up to you how you make your work done. At NaviPro the consultants have requirements where the employees follow up how they constantly produce and charge for the work they do.

Thomas Molin emphasize that disadvantages of mobile working are that consultants constantly have to be reachable, and for some it can lead to stress. We are very clear with our customers that we are available between 08-17; it is our normal working hours. It’s up to the consultants themselves if they choose to answer work related issues after working hours; they have absolutely no obligations to answer after 17. The consultants have different relationships and
4.2.3 MOBILE TECHNOLOGIES

In order to work mobile, the company has to have technical infrastructure that supports the consultants when working remotely. Today NaviPro use the brand called ThinkPad, the old IBM now called Lenovo. Partly because they know that this hardware works and has a great reputation, and also it is easy to use and thus easy to learn when new technology launches. When working mobile the consultants can connect externally to the company and access folder and documents through VPN since the company are using SharePoint as their intranet. NaviPro also have Wi-Fi of 54 mbps, at the office.

Anna explains that, “when you work mobile you connect yourself to a terminal server, but every tasks depends on the customer, because every customer work differently. Sometimes you have to sign up through a VPN, a so-called VPN tunnel or a remote desktop, some use Citrix. “We use Enterprise Resource Planning system and Navision in order to access our different clients” (Anna Ekdahl, 2012-03-11).

With the technical advances offered in NaviPro, Thomas Molin emphasize that the company have every technical possibilities to be mobile. He and the employees have always their mobile phones and computers with them and they can always connect themselves if it is possible. Every employee gets an iPhone when they start working at the company, this is their main tool which everyone works with. NaviPro are today completely dependent on Microsoft, they use all their tools in order to work mobile, but of course other things too. Thomas emphasizes that everyone at NaviPro has a laptop, cell phone, which is used in order to connect against the customers. We also provide our employees with free broadband connections. But it is very important to emphasize that we do not force anyone to work from home. We provide the opportunity for our employees to have access to different technological advances in order to work mobile and the consultants can choose if they need or want to do their work from the office or at home” (Thomas Molin, 2012-03-11).

NaviPro have a specific project model or a so-called methodology of their customer delivery called Sure step (Microsoft methodology). But this is like any other methodologies used by companies in terms of project execution involving a number of different components. The methodology is no different from anyone else but it has its own name. Thomas implies that the methodology itself has nothing to do with how we work, if they are mobile or not. Thomas believes that the greatest efficiency of having mobile phone and laptop is that you can work wherever you are. When working with different deliveries, the work is mostly done from the office but when the consultants work out of the office with customers they always brings their computer in order to connects and access a central server to the office or to the customers regardless of location. They also use
their mobile phones if needed to access a central server anywhere, every consultant have mobile broadband.

“Through the mobile broadband the employees and I can connect us to our office and we can also connect ourselves through our machine packs and the customers’ systems. Our employees have the opportunity to use Internet in order to surf and use Facebook”. For example, if we go out to visit a customer and we sit in the car for a couple of hours, some of the consultants bring their laptop in order to do more work and connect themselves to the office or surf” (Thomas Molin, 2012-03-11). According to Thomas Molin “mobility means that our consultants also have the opportunity to make different work related calls and other tasks in the car while driving. But of course there are some drawbacks, “the constant pressure to constantly be reachable”. But Thomas underline that he doesn’t impose the consultants to always be reachable, it’s up to the consultant and they have the freedom to choose, not be forced” (Thomas Molin, 2012-03-11).

Both Anna and Teo consider themselves to be between 80-100 percent mobile, they use their laptop, IP telephony called Lync, mobile phone which is a smartphone; iPhone. Teo emphasize that NaviPro use Internet as their primarily tool, which is quite important. “We use mobile phones, laptops computers, which everyone has access to anytime. The company’s domain name is workanywhere.se, which means we can work wherever we are. We use remote desktop, which means we access to everything from the office, and is almost the same as work from the office, since you are running on the server. We have connections to all our customers; it can be through Cisco or VPN. So we don’t only have access to our office but also to our customers anywhere” Anna emphasizes that “When I work at the office, I work mobile, since I have my mobile phone turned on and I’m reachable all the time”. Teo also consider that working at the office means that he works wireless, therefore he work mobile.

According to Thomas mobility requires that we have the latest technology in order to perform our tasks and gain competitive advantages, and Thomas believe that NaviPro have the latest technology today, if nothing else, they constantly evaluate the latest technology. He further explains that they do not always use the latest technology in the first place, because they have a server hotel at the company where there are a number of customers running against it, about 200-250 users, so Thomas argue that it’s difficult to change the whole technology. The server is not something you are experimenting with. “We evaluate and test and wait until there’s a service pack that can fix the initial obstacles or problems we have. So we constantly watch the latest technology but it is not certain that we use it, an example is the new Office version. We don’t choose the newest versions, but we wait a little bit, and use the latest version when it feels right and more stable”. NaviPro also use Lync, which works fantastically well according to Thomas, and this is a very mobile way of working today, unlike before when we just used to use IP telephony. Through intranet and regardless of location the employee’s can now through their computer and other advances work mobile.
4.3 CASE 3: Logica

4.3.1 BACKGROUND
Logica is an international leading IT company with 41 000 employees worldwide and with 5200 employees in Sweden. The company provides business-consulting, systems integration and outsourcing to clients around the world, including many of Europe's largest companies and organizations. Logica creates value by integrating people, business and IT. With long-term relationships and deep business insight they create innovative solutions for their clients. It is committed to long-term collaboration, applying insight to create innovative answers to clients’ business needs. Logica is listed on both the London Stock Exchange and Euronext in Amsterdam (LSE: LOG, Euronex: LOG).

Madeleine Åkesson
Madeleine’s general role at Logica is to work as a business analyst, but she also works partly as a project manager. SharePoint, which is a platform to build intranet solutions, extranet solutions and projects for investment companies, is a very big part of her duties. She started in the company as an educator, where she educated new users in SharePoint. Her role now is to meet customers, where she often discusses particular requirements. Much of her work includes working on producing requirements. You can define her as a spider in the web between the customers and the internal software engineers. Madeleine has quite a lot of experience in IT; she has a 4-year long academic background and has worked as a business analyst for four years.

4.3.2 MOBILITY
When asked what mobility is for her, Madeleine Åkesson answered: “mobility for me means that I can do my job anywhere, regardless geographical location with the right access of mobile technology that can support mobility”. Since Madeleine works as a business analyst it requires that she travel regularly and thanks to computers, mobile phones and network connectivity available today, she is able to work with customers both in and out of the office (Madeleine Åkesson, 2012-03-12). Madeleine stress that mobility is the ability to move or change, which means working in different places but still having the same opportunities and possibility to perform the same task. When asked what the time difference between working in the office and mobile is, she answered: “I think I save about one hour when I work at home compared to when I work in the office. I save much time on the trip, but most of all because it is quiet at home and because I never get disturbed. However, she believes that lack of social interaction is a main difference between working at home or in the office. I have no one to talk to when I work from home, there are no colleagues nearby and I have no one to ask when I need help and no one to talk to when I need a break” (Madeleine Åkesson, 2012-03-12).

Mobility is kind of a freedom according to Madeleine; she cannot see herself working with anything other than being a consultant. She enjoys working mobile and she enjoys meeting new customers and performing new tasks all the time. "The work doesn't get monotonous when working with different clients all the time, which is fantastic" (Madeleine Åkesson, 2012-03-12). When asked how mobility can be streamlined Madeleine emphasized that mobility can be
streamlined by improving the 3G networks. Better access would open up more opportunities. The social interaction is vital; you miss a lot without the social interaction. Social interaction is the main disadvantage with mobility and can have serious consequences in the long run. Madeleine believes that she is very mobile today and that she has been very mobile the last ten years. Mobility has always been there; it is something that has increased in the IT development. When asked how mobile she is, or have a technical ability to be Madeleine answered: “I wish the 3G network was better. When I sat at a meeting with a customer, not so long ago, I couldn’t access to Internet because the 3G networks was very low in that area. It is not always obvious to get a guest login from the customer so a functioning 3G network is vital” (Madeleine Åkesson, 2012-03-12). Madeleine further stress that mobility isn’t just a way of work, it’s more of a lifestyle and life wouldn’t be as it is today if it wasn’t for the technology we have today. If you take a look at some places, especially in developing countries, you can see that they still live very simple without smartphone, computers or 3G networks, resulting in more social interaction because of the lack of IT and mobile technologies says Madeleine.

4.3.3 MOBILE TECHNOLOGIES
Madeleine believes technology is the key to modern mobility, as quoted: “Mobility for me means that you can do your job anywhere, regardless geographical location. This also applies the right access of mobile technology that can support mobility (Madeleine Åkesson, 2012-03-12). It is quite clear that technology is vital; IT is playing a big part of our daily life. Everything is based on technology today compared to 20 years ago according to Madeleine. The smartphone has made a huge impact in recent years; it is a combination of a computer and a telephone. It contains e-mail, chat, a camera, a calendar; you can even get access to your bank account and handle transactions through your smartphone etc. It almost has everything that we need, “the only thing missing in it is food and water”.

When asked what technology she uses the most, she answered: “when I work from home, I use our wireless network that is connected through a VPN. The VPN is a mandatory client to connect to our network and get access the intranet, my e-mail and all our programs. When I travel, I usually connect myself through my iPhone, computer or my Ipad. Earlier we used VPN boxes here at Logica, but now we have a service that generate a code, the code can then be used through the smartphone or through the computer. We use both personal codes and generated codes” (Madeleine Åkesson, 2012-03-12).

When asked which one of the technologies she uses the most she answered: “my smartphone is important because it covers just about everything. It allows me to manage my email, my calendar, and also make important notes. My laptop is also something I can’t live without because of my role as an IT consultant. Mobile broadband is very important, because otherwise I cannot connect or use the Internet. Remote access is important because I can access all internal programs and folders from it, I can sit in china and have access to my customer’s server for example. Conference calls enables allot for us consultants, as we do not have to travel as much anymore, the same is for video conferencing. Net-meeting is
important because you can present something to someone while talking to the person/client” (Madeleine Åkesson, 2012-03-12).

4.4 SUMMARY

This case study has been very good and useful because the respondents answered all questions and covered everything in the topic of mobility and mobile technology. During this interview, the authors found that there is a great lack of social interaction among consultants. The critical shortage of social interaction is so big that it needs to be studied individually, together with further implications. This seems very interesting and the authors feel it may be worth studying more closely. It is also very interesting to know what technologies consultants use the most and what technology that can make their work more effectively. The conclusion of this case study has paved the way for a second interview in which the authors focus on the implications arising from mobility and how social interaction affects mobility.
5 CASE STUDY 2

Based on the previous chapter and the previous interview responses, the authors have conducted additional interviews presented in this chapter. This has been implemented to create a broader understanding of what implications that arises from mobility as well as what social interaction really means and what impact it has on the consultants’ mobile work.

5.1 CASE 1: SOGETI

5.1.1 IMPLICATIONS OF MOBILITY

Many of today’s consultants have a requirement of constantly be reachable. When Mikael and Peter were asked how this affects them, they answered: “this affects us negatively since all the technology available today requires that we as consultants have to be reachable at any time during the day to our customers. This can result of higher level of stress and more interruption in private life. But there are some adjustments made by the consultants in order to distinguish between private life and working life. Peter for example emphasize that he schedule he’s email sync to just be running continuous between 08-17 between his normal working hours, and then after working hours only once an hour. “If I have multiple parallel assignments, I book them into separate days for different customers and then only work with one customer at a time” (Peter Arvidsson, 2012-03-06).

When asked which implications the consultants encountered when working in the office, Mikael answered that he encountered; misunderstanding between customers, lack of productivity, lack of efficiency as well as interruption at work. He argue that “It’s always much better to sit with the customer and work face-to-face because it is not only abut words but also images, you can talk about things and present solutions smoother. The risk of misunderstanding between the customers is huge. I do experience lack of productivity, I feel that I never can be 100% productive because there will always be problems. Lack of efficiency is something I experience sometimes because I can get a phone call from customer A when I sit on the phone with customer B, and even if I hang up and call again, it still takes a minute or two before I can stop thinking about the first call. Interrupted at work is always something you experience when working in the office because you never sit by yourself, you have your colleagues and other people around you” (Mikael Lindberg, 2012-03-06). Peter encountered following implications when working in the office; misunderstanding between customers and interruption at work, “I feel that it sometimes can be some misunderstanding between me and the customers. If I email them too much, it can sometimes be misunderstandings and it get dissolved by calling instead. In addition, it also happens that I get interrupted at work, but this is a big part of every consultant’s daily work“ (Peter Arvidsson, 2012-03-06).

Mikael checked off all four options because he experiences all of the implications when he works in the office. According to the citation above he obviously has problems working in the office. Peter only experiences that there can occur a misunderstanding between him and his customers and that he can get interrupted at work sometime, but he also argues that it’s a big part of his daily work. When asked which implications the consultants encountered working outside the office
Mikael felt that lack of social interaction was the main implications encountered through mobile working. “Lack of social interaction is something I experience only with my colleagues and not with my customers. Higher level of stress is something I never experienced; it’s more the other way around because I am more dedicated and focused when I work at home or at the customer’s office. Limited access to resources is something I don’t experience, because I always have everything I need with me, except a printer. I don’t experience lack of face-to-face communications because I often communicate with everybody face-to-face when I’m at the office; however, there is a lack of face-to-face communication with my colleagues outside the office. Lack of productivity is something I don’t experience, it’s more the other way around, and I’m more productive because it feels like I’m more productive” (Mikael Lindberg, 2012-03-06).

Peter on the other hand experienced lack of social interaction, higher levels of stress, limited access to resources and lack of face-to-face communication when working mobile. “I feel a lack of social interaction when working outside the office. It is very important to meet with your colleagues over coffee, lunch etc. So I either work a day in the office or meet my colleagues at the office as in meetings or activities, etc. There is a high risk of higher levels of stress because a consultant is more demanding on himself at the customer’s office. Limited access to resources is something I feel, to some extent. If you have your own laptop and VPN box with you, then you can be accessed by all resources. Some customers, however, requires that you get a separate client PC and it limit the access even more. Lack of face-to-face communication has a lot to do with the lack of social interaction. Lack of productivity is something I never experience” (Peter Arvidsson, 2012-03-06).

When asked how all these implications can be avoided Mikael answers: “It's about being clear about what the task entails, you must be an orderly man, and be humbled by the task. It is also important to have awareness that you cannot cover everything. It is important that you dare to stand up and dare to speak out” and when asked how all these implications avoid him and his daily work he answered: “Sometimes it's easy to forget what the task really is all about and it’s easy to lose focus on what tools and resources you have. It’s hard to know what path to choose, when you don’t have the destination in front of you” Mikael Lindberg, 2012-03-06).

What are the implications of constantly being reachable and how do you avoid them? “The implication is that it is hard to make a distinction between work and private life. I avoid this by being aware that it's okay to not answer the customers at any time after working hours. One thing that many people don't think about when calling us is to ask: Hey are you busy, do you have time to talk now? This will give the consultant time to answer if he is busy or not and if he or she can help the customer (Mikael Lindberg, 2012-03-06).

When asked how mobile implications affect the social interaction, Peter answered that “all mobile devices cannot fully replace face-to-face meetings, so it has a negative effect, but on the other hand, the tools have made it possible to interact better now than before when working mobile” (Peter Arvidsson, 2012-03-06). In the last question we asked Mikael and Peter to rank the implications of mobility from 1- 10 (10 being the most common), below are the answers;
Mikael Lindberg

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5.1.2 SOCIAL INTERACTION

When asked what social interaction is for Mikael he answered: “Traditional communication, when we sit and talk face to face, in particular personal contacts and dialogues between two people. Social interaction is very important because it is a prerequisite to progress in a business relationship or a personal relationship. It is the social interactions that both ask questions and provide answers to questions” (Mikael Lindberg, 2012-03-06).

Peter answered that social interaction is communication with other people; it may be different groups (job, family, friends, associations, etc.) and different ways of communication (verbally, letters, emails, sms, telephone, video conferencing, blogs, forums and other social media like Facebook, LinkedIn, etc.) Social interaction is very important, today when everything goes faster and faster, it is essential for effective work, it is when people interact new ideas emerges, consensus gets created, and decisions are anchored and so on” (Peter Arvidsson, 2012-03-06).
Mikael sees social interaction as a matter of course and believes it is the key to good mobility. He believes that you should know how to combine them both if you want to be a successful consultant. When asked how mobility has influenced the social interaction, Mikael answers: “It has increased the possibilities of it; it is the direct contact that has grown i.e. face to face communication. I have the ability to communicate when the opportunity or need arises through different mobile technologies. This means that I can go from a customer and directly call the next customer” (Mikael Lindberg, 2012-03-06).

When asked how mobility has influenced/affected the social interaction, Mikael answered: “I’m very influenced of the subjects that I have around me. It is very important because social interaction is part of almost everything in my job”. Peter answered that mobility has created more channels and tools that have been speeded up and improved and simplified interaction very much. When Mikael and Peter were asked how they are affected by the social interaction in the office, they say: “I have great social skills, and this helps me a lot. I believe communication is the cornerstone of a functioning business. Even though we create systems that we communicate with, we would never be able to do this unless we translate our own communication” (Mikael Lindberg, 2012-03-06).

Peter emphasize that the social interaction is affected both in a positive and negative way. It is positive that I can take cognizance of things happening in the office and in private life and that more people can reach me faster through multiple channels, but it also increases the stress when a task can be interrupted. People are basically designed to do one thing at a time, but all social media mean that we assumed to work alongside many different things that aren't always as effective as we think” (Peter Arvidsson, 2012-03-06). When asked how the company is affected by the social interaction in a single office they answer: “We have different forums and different areas of interest, but there is not much communication on a country basis but, at the regional basis, it works very well” (Mikael Lindberg, 2012-03-06). “This has made it easier to collaborate remotely; one can conduct effective teleconferences without having to travel as much” (Peter Arvidsson, 2012-03-06).

When Mikael and Peter were asked how social interaction affects their mobile work, they both answered that social interaction affect their mobile work in a very positive way and with an increase of 40%. Although it increases, they still experiences that there can be a huge lack of social interaction with their colleagues when they work outside the office. But they also experiences that the communication with their customers have become better because they can focus on one customer at the time.

Mikael stress that the mobile work makes him more social, because he choose to use mobile technology. “It depends on what you do for the valuation of the mobility. I can call a colleague, but it doesn’t have to be because it’s important, but more because I have the ability to call him, so I do it and so I become more social thanks to mobile technology. Yesterday for example, a customer tried to get hold of me. I didn’t have time to talk to him earlier, but I had time to talk to him while I was in the car, thanks to the one-hour drive home. I would say an increase of 40%, because I am always reachable” (Mikael Lindberg, 2012-03-06). Peter
also experiences an increase of 40% because it is easier to be updated via smartphone for email, Facebook etc. and also to connect the laptop via 3G/Wi-Fi etc. When asked if the communication between you and your colleagues is reduced/affected by mobile work? Mikael answered that “I think it decreases as the traditional social perspective means that you only have social interaction when you're in the office and talk face to face, but the truth is that you always interact socially unless you decide to outsource everybody and decide to only communicate with people from home by social media i.e. new technologies. The tools that are used for increasing social interaction ability are here now and these technologies are: mobile phones, emails, Ipads, Facebook, mobile broadband etc” (Mikael Lindberg, 2012-03-06).

When asked how mobility can facilitate the interaction between consultants and their customers, Mikael answers: “I don’t think it is possible to facilitate more than what it is because I have access to their intranet, they have project place where they put up all the project information and I have contact lists for all customers”. And when asked what mobile technologies can support the interaction between him and his colleague’s regardless geographical location, Mikael answered that access to computer networks, access to telephony. But above all, access to a laptop and a smartphone can support the interaction. Peter stress that social interaction can be facilitate through more great tools like Lync, Skype, SharePoint, etc. When asked if social interaction ever affect their feelings or if they ever feel loneliness, alienation, lack of affection? They believed that social interaction doesn’t affect their feelings and so on, it’s quite the opposite.

“The fact of knowing what cooperation forum there is, for instance, if you do not know which forums or Medias that are available and do not communicate and interact through them, you may feel a bit left out. My job means I should be aware of the different social Medias, technologies and programs that are out there and I can experience being left out when I’m not aware. But it’s about finding out everything by yourself. Sometimes you think you know everything, but there is always someone who has more experience and knows more. All of this affects me positively and I always feel that I’m a part of the mobile way of working” (Mikael Lindberg, 2012-03-06).

5.2 CASE 1: NAVIPRO

5.2.1 IMPLICATIONS OF MOBILITY

Today, consultants are expected to respond quickly and always be reachable in both personal professional lives, they are now constantly connected through use of cell phones, laptops, blogs, E-mail, Facebook, Twitter and LinkedIn etc. There are many advantages in being so connected; however, there are also many consequences. As the CEO of NaviPro Thomas Molin, is expected to be more reachable compared to the ‘consultants. Thomas accentuate that the company doesn’t force any of the consultants to constantly reachable. He believes that it is up to each consultant how he or she wants to be reachable; “at NaviPro we have regular working hours from 8-17. If the consultants then choose to respond or answer their customers after 17 then it's all right, but it still up to each one. Some of the consultants always respond while others are more disciplined enough and turn off their mobile phones after working hours”.

- 38 -
Thomas Molin further stress that there have been occasions four to five times a year, when different important projects start on Friday, meaning that the people involved have to be reachable during the entire weekend. When the consultants were asked about the pressure to constantly be reachable Teo answered that the need occurs more during working hours and not the same when working mobile. “I decide when I want to be reachable or not, there is no requirement to constantly be reachable. I have a choice to respond to the customer or not, I can choose to answer the customer calls after hours or not”. Anna further stressed that she is very good at turning off after working hours are over, but she believes that it is always stressful to have e-mail connected to the mobile phone, because it's hard to resist checking the different emails whether its private or from the customers. Sometimes she has to work during the weekend and be reachable online at a certain time when working with different projects. Thomas believes that there are no implications of constantly by reachable, “it is a part of my job, I have people around me who understands and accepts the fact that I have to be accessible all the time as the CEO of NaviPro, but I can still decide when I want to turn my cell phone of. I do not feel I need to avoid it by being constantly reachable” (Thomas Molin, 2012-03-11).

Anna on the other hand emphasize that stress is the main consequence of constantly be reachable, consultants have more difficult to relax from work and this is very important. But otherwise Anna believes that mobility is positive, “you can be out with your customers much more, which means it will be more social networking compared to working from home, then you just talk on the phone, check e-mail and no face-to-face interaction. It is more social interaction at the office and working remotely with customers than at home. Teo accentuate that you choose when you want to be reachable.

When asked which implications can arise when working in the office the respondents where quite consistent, they answered that the most common implication of social interaction is interruption at work. Anna also stressed that lack of efficiency may be a consequence of interruption at work and Teo further argued that there could be some misunderstanding between the customer and the consultant to a small degree and thus lack of productivity. The most common implication occurring when working outside the office is lack of face-to-face communication according to all of the respondents. The lack of social interaction is also a big issue when working mobile, higher level of stress could be an issue when working at the office if you get interrupted of colleagues, according to Anna. Anna also believes that limited access to resources might be a problem when you have connection problems and you have to work with a small screen or just a laptop compared to a big desktop computer at the office.

When asked how these implications could be avoided the respondents answered that it is very difficult. According to Thomas “it is difficult to avoid the implications because you are not physically in the same place, of course you can use Lync in order to chat faster with someone and of course it is a social interaction”. Teo believe that you can avoid face-to-face communication by turning the camera on, and then you have social interaction in the same way as physically meeting. The following implications doesn’t affect the consultants in any significant way, however, if you are stressed this could influence the work negatively at the office and personal life. As the CEO, Thomas has the opportunity
to direct his own work. He has a great opportunity to be very flexible; the consultants on the other hand have different customer requirements for example to answer questions regarding different projects.

The implications of mobile working can affect the social interaction by providing less face-to-face communication; the social interaction is different depending on where you work according to Teo. Sometimes you don’t get interrupted in the same way when working mobile compared to home. By working at home, you can also save time and spend more time with family, which is also a form of social interaction according to Thomas. In the last question the authors asked the respondents to rank implications of mobility from 1-10 (10 being the most common). However, Teo on the other hand didn’t answer this question since he doesn’t see any of these implications arising from working mobile, following answers are from Thomas and Anna;

Thomas Molin

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<tr>
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<td>8</td>
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<td>Social and professional isolation</td>
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<tr>
<td>Lack of social interaction</td>
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<tr>
<td>Longer working hours</td>
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<tr>
<td>Higher demands of constantly be reachable</td>
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<tr>
<td>Lack of secure information</td>
<td>3</td>
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<tr>
<td>Limitation of technical equipment’s and services</td>
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Anna Ekdahl

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<td>Cost implications</td>
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</table>
5.2.2 SOCIAL INTERACTION

Social interaction has a very important part in NaviPro, it enables the employees to meet, interact and communicate with each other, with the customers and different suppliers both internal and external. The respondents believe that social interaction is very important both at work and in personal life. Anna emphasizes, “social interaction is very important. It is how we are perceived as a person and how we succeed in the workplace and in social life; it is how we communicate with other people, at work with colleagues, clients and suppliers”.

Thomas stress that social interaction can solve many technological issues, however he argues that sooner or later you have to sit face-to-face and meet the customers in order to solve different problems and come up with solutions. Teo on the other hand stress that social interaction doesn’t need to be physical, “you don’t have to meet face-to-face, you can now with help of different technical advances integrated by means of telephone or other social media like Facebook or Lync” (Teo Barbu, 2012-03-11). When asked how mobility can influence the social interaction Thomas accentuate that “mobility makes social interaction more qualitative, it entirely depends on the type of person and if the person is social or not, and we have to respect that. Social interaction can cope with any complex discussions or technical discussions at a distance”. Mobility and social interaction enables the opportunity to treat different ideas without having to meet face-to-face, and you can still identify different problems and make decisions.

Anna believes that “mobility affect the social interaction, both positive and negative. The downside is that they we are not as social anymore as we were before, for example, when we eat lunch we now sit with our colleagues and play word feud or use Facebook instead of interact”. Teo stress that mobility has taken over our lives; we live our lives through mobility by networking. The advantage with mobility is that people can be reached anywhere. Teo stress that mobility has not influences the social interaction negatively, mobility has rather affected the social interaction more positively, we are now able to interact more through mobile technologies. Mobility is not as physically as it was several years ago. Now consultants have the opportunity to talk with three colleagues at the same time from different places, through different media.

The social interaction at the office implies that there will be interruption in work by colleagues and other things. Thomas Molin believes that social interaction at the office if very important, it is very positive to interact with each other and he always has his door open for questions etc. Anna is affected very positively by social interaction at the office. However, she argues that colleagues can sometimes disturb her and thus interrupted in current work. Teo also agree, he thinks that social interaction at the office is very positive, because you can actually talk about other things than just work with their colleagues. He stress that the physical interaction must exist, it is important in the workplace in order to gain success. As the CEO, Thomas contribute to very much in the social interaction, he is very social and he believes that it is very important to have a coffee together, integrate and talk to each other with colleagues about things that do not affect their work. He believes that the consultants need to have some relaxation and rest their mind from the task they have in order to get new motivation. Both Anna and Teo
contribute to a positive social interaction at work, they believe that social interaction is important.

When asking the CEO, Thomas Molin, how the company is affected by social interaction, he answered: “You can solve different issues through technological advances but in the end you still have to meet occasionally and enjoy the social side and this is a big failure in today's technology”. The social interaction cannot just only be created through technology, it’s a culture, he also believes that social interaction affect the company very positive, it is a must. Thomas also stress that mobility increases the need for social interaction, he doesn’t believe in only virtual community were you never meet. The need for social interaction is 20% but if you work mobile it can be reduced by 40% based on that you are not as social as you should be.

According to Anna she believes that the social interaction can be reduced by 40% depending on where you work mobile. If you work remotely with your customers then you have more social interaction compared to working at home. If you work at home, you may feel lonely, because you don’t have anyone to talk to or have coffee with. But you can ease your social interaction through e-mail or instant messaging. Teo argue that the mobile work is not affected differently if you work at the office or remotely. The respondents don’t feel any reduction in fellowship between colleagues, since the company has a good team spirit. Internet, e-mail and other technological advances could facilitate the interaction with the customers better, according to Thomas. Both Anna and Teo emphasize that they have a good interaction with their customers today; we have good connections and everything we need to perform different tasks both internally and externally.

“We with the help of all technologies and social media available, we can perform all our work with our customers. We have, for example, customers in Hong Kong where I can take over their computer to check the system” (Teo Barbu, 2012-03-11). According to Thomas, Internet is the best information carrier, which makes the social interaction possible both with the external customers and colleagues at the office, the company also have Net meeting, Lync. This is also supported of Anna and Teo, Anna believe that Lync can support the social interaction very well, because you can reach each other and share different information, as long as there is network when you work mobile. She also stresses that video conferencing as well as teleconferencing can support interaction as well. The respondent doesn’t fell that social interaction can affect their feelings in a negative way, sometimes when working at home longer period, you can feel loneliness. However, mobile technologies can sometimes take over the private life, since instead of socializing you are sitting with your mobile phone or computer.

5.3 CASE 1: LOGICA

5.3.1 IMPLICATIONS OF MOBILITY
Since Madeleine works as a consultant, a big part of her job is to be mobile and mobility often means being constantly reachable. When Madeleine was asked how this affects her, she gives a different perspective on the answer compared to the previous answers. Many of today’s consultants have a requirement to always be reachable. When Madeleine was asked how this affects her, she answered: “my
job involves working 8-17 and here there is no requirement that you must work in the evening. Sometimes you work in the evening just to put your best foot forward but it is not a requirement here at Logica. It doesn’t matter when I work, as long as I do my hours (8-17) and take care of my job. Everything is about the customer; as long as it's okay for the customer and the chef, then everything is all right. I have colleagues who turn off their phones in the evenings and weekends and never respond to emails outside work time. I also know colleagues who deletes emails that they received during their vacations and think; “If it’s something important they will send again. Especially managers who get a lot of emails, but I usually decide such things myself. Sometimes I answer and sometimes I don’t because I do not feel I have a requirement to be constantly reachable” (Madeleine Åkesson, 2012-03-12). There are many implications of mobility according to different authors and the ones stated below are taken from different authors and different viewpoints from the theory chapter.

When asked if Madeleine encountered any implications when working at the office she answered that she felt misunderstanding between customers, lack of productivity, lack of efficiency and interruption at work. She experiences all the implications when she works in the office. Misunderstanding between customers, is something that she feels sometimes, especially when she is working in the customer's office and gathering requirements, it often happens that the customer wants something but she perceives it as something else. She also experience lack of productivity sometimes, when she work in the office. It is very difficult to have 100% focuses when you are surrounded by colleagues. They are always talking and joking with her, but she sees it as part of the job. Lack of efficiency is something she experience, but very often, because of the same reason the last implication. Interrupted at work is also an implication that she is experiencing, this is also something that is a big part of her job, because her colleagues always have questions that need to be answered right away.

When asked which implications Madeleine encountered when working outside the office she answered that she felt a lack of social interaction, limited access to resources, lack of face-to-face communication and lack of productivity, however she didn’t experience higher level of stress. When it comes to working outside the office, there can be different implications. Madeleine feels that lack of social interaction is a very big disadvantage and the consequence of working outside the office. She sometimes misses all the jokes and talks in the office. Limited access to resources is not something she experience because she thinks she has all the technology and resources needed to perform her job no matter where she is. Lack of face-to-face communication is something she feels she misses in today's technology, as there are very few technologies that offer face-to-face interaction, but this is something that is interwoven with social interaction.

Madeleine was very unsure in the last question because she only experiences the lack of productivity when working at home, and believes she is very productive when she is working with customers in their office. Madeleine was then asked how all these implications affect her and her daily work, and she gave a very simple answer, “stress is something I think everybody should handle by themselves. Apart from that, I don't think you can do very much to avoid the implications. Maybe by having more video communication for example by, using Skype, face time, video chat on msn, etc” (Madeleine Åkesson, 2012-03-12).
When we asked what the implications of constantly being reachable are and how do you avoid them, Madeleine answered “to constantly be reachable is positive for those trying to reach the person, but sometimes it is hard to be reachable at all times. The only way to avoid this is to not respond to emails or calls after five o’clock at noon. Or, place a "out of office” notice”. The quotation above was one of them that really caught our ears. It is really interesting to hear what she really does to avoid these situations. In the last question the authors asked Madeleine to rank the implications of mobility from 1- 10 (10 being the most common).

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<td>Cost implications</td>
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5.3.2 SOCIAL INTERACTION

Social interaction is considered to be an obvious matter for Madeleine, but she has different perspectives on it. When mentioning "social interaction" for her, she immediately thought about social media such as Facebook, twitter, msn, etc. When asked what social interaction is for her, she answered: “social interaction for me is more about social media, such as Facebook, twitter, MySpace etc. However, even tool that are used to interact with, for example LinkedIn etc. We at Logica are right now developing a service that will work as news feed where you can blog and create news feeds. Everybody have a Facebook account or a twitter account, so it is important to present information via such social Media. Then social interaction is also the interaction you have with your colleagues when walking in the corridor or when you are communicating with someone on the phone or during a coffee break. For me, any type of meeting is some kind of social interaction” (Madeleine Åkesson, 2012-03-12).

When asked how mobility has influenced/affected social interaction, Madeleine answered: “It has affected me very much because everybody has the possibility to have everything in their pocket nowadays. Today we have, for example, Facebook, twitter and LinkedIn in our pockets and do not always have to sit at a computer to interact. Mobility has affected the social interaction in different ways, both positive and negative, positive, because there are more opportunities and because we are reachable at all times. You can also now communicate with someone sitting in China by pushing a button. This has affected many negatively because it creates a social isolation and lack of face-to-face communication because of being in different geographical locations. Also, because I can do status updates through
Facebook so others can see where I am. If I write: "Today I am on a business trip in Stockholm, perhaps my colleagues and friends in Stockholm see this and contact me. This did not exist before when we had to call or fax everyone" (Madeleine Åkesson, 2012-03-12).

Madeleine was asked how she is affected by the social interaction in her office, and she seems to love her job and her working place based on her answer: “I think I am influenced and affected in a positive way, because everyone is happy and nice at the office. I’m very happy to be here and work the way I do. Thanks to various tools such as Microsoft messenger, we can communicate without talking. You can write secrets and notes without having to go into another office or go to another room” (Madeleine Åkesson, 2012-03-12).

Madeleine was asked: How do you influence the social interaction at the office? She answered: "I am kind of a PR Manager here and write newsletters that I send out via mail. I am also responsible for various rights in our intranet. I contribute with a big smile and good fellowship in my office” (Madeleine Åkesson, 2012-03-12). How does the social interaction in every office affect the whole company? According to Madeleine it doesn’t matter how much we communicate digitally, via email, messenger or telephone; you can never be as effective as sitting in the same room with the other person. We have developers in India, for example, and there is no difference if he / she are sitting there or in Stockholm, however, is the big difference between whether someone is sitting in the same room and not because of the lack of face-to-face communication. Logica have about 26 offices and it is not always easy to communicate with every office. However, all offices have their own events, their own after works and parties, and the cohesion is very good.

When Madeleine was asked how social interaction affects her mobile work. She replies that social interaction is affected in a positive way and that it increases by 60%. Although it increases, she still experiences that there can be a huge lack of social interaction when she work outside the office, but it depends a lot on how far away she is. Madeleine believes that communication between her and her client’s works very well today, but that it can be facilitated considerably more if there had been proper tools. When asked how we can facilitate the interaction between her and her customers, she answers: "Right now I can only communicate with them via email and telephone. I wish I had better customer portals, interactive portals where you can decide the rights of each and every customer and employee from Logica. The Customer Portal will be used to communicate, interact, and write documents, share documents and writing status updates just like on Facebook. I would like it to be more like a social portal where you can invite customers to projects and where you have everything in one place. It should be possible to invite anyone involved in the project and it should be closed to all others. Almost like project place, but more like Facebook, I think it would have facilitated the interaction between my customers and me a lot. In today’s situation I’d rather e-mail or call my customers than use any of the software’s/tools available today” (Madeleine Åkesson, 2012-03-12).

When asked how mobile technologies can support the interaction between Madeleine and her colleague’s regardless geographical location she answered that smartphone can be used make calls and communicate via the phone, Ipad to be
able to present results and suggestions for the client, remote access get access to important documents and be able to get into the my customer’s server, live meeting is good because it allows us to see each other desktop. Teleconference is also very important because you can sit very many, and communicate with each other. VPN is very important and secure because it's like sitting in the office no matter you are” (Madeleine Åkesson, 2012-03-12).

5.4 SUMMARY

Based on the second interviews, the authors have gained a deeper understanding of the two aspects (implication of mobility and how social interaction affects mobility) and got great results on what technology that can facilitate their work. After this case study, it is obvious that there is a problem with mobility. The majority of the consultants in the case study felt that there were major implications of mobility and the greatest of them all is social interaction. The consultants were also given the opportunity to rank and reflect over the technology they use the most important.

All this meant that there had to be a third interview to find possible solutions on what can be done to avoid these implications and how to solve the social interaction.
6 ANALYSIS

The following chapter analyzes the case studies with the support of chapter 3 and chapter 4. The chapter consists of an analysis based on the three sub questions:

1. How can mobility facilitate consultants’ mobile work?
2. What are the implications of mobility?
3. How can we streamline mobility and avoid the implications?

6.1.1 HOW CAN MOBILITY FACILITATE CONSULTANTS’ MOBILE WORK?

One trend that has been identified during the case studies is that mobile technologies increases the consultants’ work in a very positive way. The consultants have today more opportunities to increase their efficiency and they can through mobile technologies add value to the customers, and increase the attractiveness to its customers and employees. With the technological advances available in the companies today, the consultants have both the opportunity to work in the office but also outside the office and still be able to offer high-quality solutions for their customers. This is based on the fact that consultants are widely available at any time due to the fact that mobile technologies enable anytime, anywhere computing (Siau, et al., 2005). “By extending computing and the Internet into the wireless medium, mobile technology allows users to have anytime, anywhere access to information and applications, which provides greater flexibility in communication, collaboration, and information sharing” (Siau, et al., 2005, p. 270).

“Anytime/anyplace computing can remove time and space constraints in accessing critical information and enhance capabilities for communication, coordination, collaboration, and knowledge exchange” (Siau, et al., 2005, p. 273).

<table>
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<th>Teo</th>
<th>Anna</th>
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<td>6</td>
<td>7</td>
<td>7</td>
<td>31</td>
</tr>
<tr>
<td>Videoconference</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>18</td>
</tr>
<tr>
<td>Teleconference</td>
<td>5</td>
<td>6</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>27</td>
</tr>
<tr>
<td>Net-meeting</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>19</td>
</tr>
</tbody>
</table>

Table 1: Enabling Technologies
By examining the various cases, different similarities has been identified in the table above, see Table 1. The consultants have identified which technologies are considered to be most important and which one will increase the level of mobility as well as facilitate social interaction. The table illustrates which enabling technologies are the most important in the consultants’ mobile way of working. The table above reflects that laptop, smartphones and the access to mobile broadband is considered as top priority in a mobile way of working by the consultants. Based on the respondents’ answers, the consultants can perform more than half of their work by combining these three technologies, laptop, smartphones and mobile broadband with mobility. Each technology affects the degree of mobility in different ways, and the case studies have shown differences in the view of the respective technology.

Furthermore, the respondents believe that videoconferencing, net-meeting and teleconferencing, are technologies that the consultants do not extensively use in order to facilitate their work in the office or outside the office. The consultants consider that they can increase the degree of mobility if they have access to a laptop, smartphone or mobile broadband, compared to investing in a system for videoconferencing or net-meeting. To find out how much a tool contributes to the consultants’ mobility the authors asked the respondents in the interviews, where they had to allocate from 1-10 different technologies, with 10 being the most important. Consultants can have “access to Internet and mobile applications whenever the need arises, such as when ‘traveling, wandering, and visiting’. Therefore, mobile technology can result in efficiency and productivity as users can make better use of their time and attend to business and social obligations in real-time” (Siau, et al., 2005, p. 273).

Siau et al. (2005) emphasize that mobile technology can provide more flexibility and contribute to cost savings and a positively influence on the financial performance of a company. Mobile technologies can also enable better customer services by providing superior product quality and creating competitive advantages (Siau, et al., 2005). Based on the case studies it is arguable that the consultant’s are very positive to the way they work today and with the mobile technologies offered by the companies. Important to note is that technology has contributed to increased efficiency of consultants’ mobile work extensively.

Consultants can now work more efficiently outside the office, which is a major requirement for many consulting firms in order to survive. The consultants base the success of their work on the Internet and the ability to be able to work online and therefore accessible and value-added for the company regardless of their location, the flexibility of mobile working in turn leads to greater efficiency.
Table 2: Degree of Mobility

<table>
<thead>
<tr>
<th>Technology</th>
<th>Degree of Mobility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Mobile phones</td>
<td>13 %</td>
</tr>
<tr>
<td>2 Laptops</td>
<td>19 %</td>
</tr>
<tr>
<td>3 Smartphones</td>
<td>17 %</td>
</tr>
<tr>
<td>4 Mobile Broadband</td>
<td>15 %</td>
</tr>
<tr>
<td>5 Remote Access</td>
<td>12 %</td>
</tr>
<tr>
<td>6 Videoconference</td>
<td>7 %</td>
</tr>
<tr>
<td>7 Teleconference</td>
<td>10 %</td>
</tr>
<tr>
<td>8 Net-meeting</td>
<td>7 %</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Table 2 illustrates that laptops is considered as a top priority in a mobile way of working. Each technology affects the degree of mobility in different ways; it is obvious that the consultants can increase their mobile work by having access to a laptops, smartphone and mobile broadband. Table 2, indicate that there are three technologies which are used much more by the consultants, if the consultants have access to laptops, smartphones and have broadband they can perform more than 50% of their work.

The three most used technologies:

Laptops (19%) + Smartphones (17%) + Mobile broadband (15%) = LSM (51%)

One advantage that NaviPro gives visibility with a mobile way of working is that the company can easily work with dual projects both internal and external through the access of mobile technologies. Combining laptop, smartphone and a mobile broadband means that the consultants are connected and can access software, applications, servers, programs, chat, portal, e-mails and calendar etc., at any time from any location. In the office consultants use WLAN and when they work remotely they use VPN to connect to the company’s resources.

By working in the office, the consultants can be fully mobile with the help of technology available and they are working on facilitating clients outside the office. The case study shows that the consultants have access to corporate resources using
Remote Access, Net-meeting and Lync. Now that more and more consultants have access to smartphones and mobile broadband, the degree of accessibility and flexibility increase even further. However, it is important to note that mobile technologies can also contribute to different implications that are extremely important to take into account in order to improve mobility in the future. The main implications the authors encountered during the study was lack of social interaction, social and professional isolation and higher demands on constantly being reachable, this is further argued in the section 6.1.2 “implications of mobility”.

Based on the case study Sogeti are quite satisfied with the technology they use today. They see their smartphones and computers as something very invaluable and something they cannot work without. They also believe that Lync and GIMS + are the software’s they use the most. Safety is a must and a huge requirement within Sogeti as it is impermissible to connect to the office without the safety device and a VPN connection. As for mobility, it is clear that they prefer to work mobile, and this is mostly thanks to technologies that enable mobility and to work regardless of geographic location. Logica consider mobile technology, especially smartphone, to be significant in order to work mobile since ”smartphone is very important because it covers just about everything. It allows consultants to manage email, calendar, and also to be a part of the virtual meeting and net meetings.

NaviPro is considered to be very mobile in there development. All of the employees have access to a laptop, and about 100 percent have a mobile broadband. This means that the company has undergone a major development in the mobile development field, meaning that they are more efficient today compared to 10 year ago, they can now increased their productivity.

The increased productivity of being able to work mobile is something that a majority of the interviewed consultants and the CEO see as a result of increased mobile working methods and the access of mobile technologies. The CEO of NaviPro, Thomas Molin, believes that in the last five years the company has increased their efficiency, which he believes would not have been possible without the access of mobile operational procedures, and the technical resources the company have today. Thomas Molin accentuate that the most important value drivers for the company are flexibility and productivity for consultants and the company in order to gain competitive success. However, he also stress that social interaction is very important in the company and can solve many technological issues, but underline that sooner or later consultants have to meet the customers face-to-face in order to solve different problems and come up with solutions.

Based on the previous statement and the case studies, it is obvious that social interaction is the main implication arising from mobility and is hard to solve through mobile technologies. However, if we compare current technology on the market with the technology available 10 years ago, it is noticeable that we are heading towards an evolution in which the social interaction can be improved through technology and the social media available today. 10 years ago, the access of social media e.g. Facebook, Twitter, LinkedIn, Skype, YouTube Msn etc., and other mobile technologies was exceedingly limited. One of the interviewed consultants emphasize that social interaction doesn’t need to be physical when working mobile, “you don’t have to meet face-to-face, you can now with help of different technical advances integrated by means of telephone or other social
media like Facebook or Lync” (Teo Barbu, 2012-04-17). But despite all the social media available today, the problem of social interaction still remain and needs to be solved in order to facilitate the consultants’ mobile way of working.

The CEO of NaviPro emphasize that the mobile technologies available today enhance the consultants mobile work to a larger degree, however he stress that in the end, people involved in different projects have still ultimately meet face-to-face. Based on the quote “social interaction can solve many technological issues, but sooner or later you have to sit face-to-face and meet the customers in order to solve different problems and come up with solutions” (Thomas Molin, 2012-04-17). If the IT managers believe that consultant’s still have to meet in the end, this indicates that we are still far away in the technological development meaning that we have failed in our utilization of social media today, because it cannot replace face-to-face interaction.

Nigel et al. (2011) emphasize that virtual interaction has advanced tremendously, however the authors believe that the social interaction through social media does not convey the “spatiality of human interaction”, which includes context/pointing, gesticulation, judging reactions and non-verbal communication” (Nigel, Alexi, Felicity, & Sophia, 2011, p. 53). The authors further argue that virtual interaction is valuable in many different situations, thus not a replacement for face-to-face interaction in mainly initial meetings of individuals or teams (Nigel, et al., 2011). “The increase in mobile working has indicated that face-to-face interaction is important for motivation, team building, mentoring, a sense of belonging and loyalty, arguably more so than in place-centered workgroups” (Nigel, et al., 2011, p. 53).

### 6.1.2 WHAT ARE THE IMPLICATIONS OF MOBILITY?

<table>
<thead>
<tr>
<th>Implications Of Mobility</th>
<th>Mikael</th>
<th>Peter</th>
<th>Anna</th>
<th>Madeleine</th>
<th>Thomas</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced productivity</td>
<td>9</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td>21</td>
</tr>
<tr>
<td>Limited access to resources</td>
<td>2</td>
<td>5</td>
<td>5</td>
<td>8</td>
<td>8</td>
<td>28</td>
</tr>
<tr>
<td>Social and professional isolation</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>7</td>
<td>9</td>
<td>40</td>
</tr>
<tr>
<td>Lack of social interaction</td>
<td>10</td>
<td>9</td>
<td>9</td>
<td>10</td>
<td>10</td>
<td>48</td>
</tr>
<tr>
<td>Longer working hours</td>
<td>7</td>
<td>7</td>
<td>6</td>
<td>2</td>
<td>4</td>
<td>26</td>
</tr>
<tr>
<td>Higher level of stress</td>
<td>3</td>
<td>6</td>
<td>10</td>
<td>1</td>
<td>2</td>
<td>22</td>
</tr>
<tr>
<td>Higher demands of constantly be reachable</td>
<td>4</td>
<td>10</td>
<td>7</td>
<td>9</td>
<td>1</td>
<td>31</td>
</tr>
<tr>
<td>Lack of secure information</td>
<td>6</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>21</td>
</tr>
<tr>
<td>Limitation of technical equipment and services</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>6</td>
<td>7</td>
<td>21</td>
</tr>
<tr>
<td>Cost implications</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>275</td>
</tr>
</tbody>
</table>

Table 3: Implications of Mobility
Based on the table above, see table 3, you can see which implication have the greatest impact on mobility. The results are based on the interviews, in which our respondents had to choose the main implications of mobility, by ranking them in terms of points. It is obvious that the most significant implication with mobility is lack of social interaction. From the table above, there are three implications that stand out from the crowd.

- Lack of social interaction
- Social and professional isolation
- Higher demands of constantly be reachable

These three implications combined, make a value of 119 points, which means 43% of total 275. These three of ten implications build a total of almost 50%, which obviously is something that has to be solved in order to improve mobility.

<table>
<thead>
<tr>
<th>Implications of mobility</th>
<th>Implications in percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Reduced productivity</td>
<td>8%</td>
</tr>
<tr>
<td>2 Limited access to resources</td>
<td>10%</td>
</tr>
<tr>
<td>3 Social and professional isolation</td>
<td>15%</td>
</tr>
<tr>
<td>4 Lack of social interaction</td>
<td>17%</td>
</tr>
<tr>
<td>5 Longer working hours</td>
<td>9%</td>
</tr>
<tr>
<td>6 Higher level of stress</td>
<td>8%</td>
</tr>
<tr>
<td>7 Higher demands of constantly be reachable</td>
<td>11%</td>
</tr>
<tr>
<td>8 Lack of secure information</td>
<td>8%</td>
</tr>
<tr>
<td>9 Limitation of technical equipment and services</td>
<td>8%</td>
</tr>
<tr>
<td>10 Cost implications</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Table 4: Implications of Mobility in Percentage
As for mobility, it is clear that the consultants prefer to work mobile, and this is mostly due to technologies that enable mobility and the possibility to work regardless of geographical location. However, there are disadvantages in mobility according to the respondents. The main disadvantage is the fact that consultants have always an ongoing requirement of always being reachable. They all say that they sometimes feel that customers can contact them after office time, especially on weekends. Some of the respondents said that they usually set up their smartphone so it doesn’t ring in the evening because they argue that this should only happen during normal working hours and there should be a distinction between working and private life. The most important drawback of mobility is that the consultants can experience a lack of social interaction and social isolation, especially face-to-face interaction because consultants spend very little time with their colleagues when working outside the office. This is based on the tables presented in this chapter, the quotations below and also supported by Simon Liu (2010) where he discusses the challenges in mobility.

“There can be a lack of social interaction with colleagues and it prevents you from having a dialogue with your colleagues. I believe social factors are the main disadvantage” (Mikael Lindberg, 2012-03-06).

“The social interaction is the main disadvantage of mobility, to socialize with colleagues is very important” (Peter Arvidsson, 2012-03-06).

“The lack of social interaction is a big implication, I have no one to talk to when I work from home. There are no colleagues nearby. I have no one to ask when I need help and no one to talk to when I need a break” (Madeleine Åkesson, 2012-03-12).

“Mobility affects the social interaction, both positive and negative. The downside is that they we are not as social anymore as we were before, for example, when we eat lunch we now sit with our colleagues and play word feud or use Facebook instead of interact” (Anna Ekdahl, 2012-03-11).

“You can solve different issues through technological advances but in the end you still have to meet occasionally and enjoy the social side and this is a big failure in today’s technology” (Thomas Molin, 2012-03-11).

This is a great sign of negativity because consultants spend between 20% and 35% of their time in interactions with colleagues according to Heerwagen et al. (2004). The authors further argue that it is found that managers spend about 60% of their time in face-to-face interactions, which is quite a lot. This being the biggest implication is a sign of failure in the IT development. Banita and Yogesh (2009) indicate that when informal face-to-face interaction becomes irregular, the implications for home workers are generally depicted as being negative, which can lead to a variety of unfavorable implications for the individual.
6.1.3 HOW CAN WE STREAMLINE MOBILITY AND AVOID THE IMPLICATIONS?

Based on the case studies it is clear that if the consultants have access to laptops, smartphones and mobile broadband they can streamline their mobile way of working. Through laptops, the consultants have access to smartphones, remote access, net-meeting, videoconference and teleconference but have no access to mobile broadband or smartphone because these technologies are completely independent from laptops.

![Diagram showing the relationship between laptops and smartphone](image)

Figure 7: Illustrate that laptop enables following technologies

The access of a smartphone will enable consultants the possibility to enjoy everything that a computer would do, but in a smaller design. All the access consultants have through their laptop is now available via the smartphone. The great thing about a smartphone is that it includes and enables the consultants to download different features, software and applications. By using a smartphone the consultants have the opportunity to make phone calls in the same way as with a mobile phone, but there is no access to laptop or mobile broadband because those technologies are completely independent from it.

![Diagram showing the relationship between smartphone and mobilephone](image)

Figure 8: Illustrate that smartphone enable mobilephone

Mobile broadband will make it possible to use both laptop and smartphone regardless of location. With mobile broadband consultants are able to connect to Internet and perform their work on the go, which in turn will improve the efficiency of mobility. Based on the case studies, the authors have drawn the following conclusion that the consultants chose laptops and smartphones as their primarily resource when working mobile, assumed that these technologies already have Internet, i.e. mobile broadband. A laptop and a smartphone are 100% dependent on a mobile broadband as it allows access to the Internet and makes it easier to carry out the purpose with the technology.
Based on the case studies and the third interview (see appendix), the authors have concluded that the main implications arising from consultants’ mobile work are:

- Lack of social interaction
- Social and professional isolate
- Higher demands of constantly be reachable

These implications influence the consultants’ mobile work differently depending on the situation and the individual. Although there is a wide range of different mobile technologies, programs and social medias available on the market today, the consultants accentuate that the lack of social interaction is still difficult to reduce and hard to avoid when working mobile. The consultants believe that social interaction is essential in order to increase face-to-face communication, share knowledge and to add value to the company. Based on the case studies, with six respondents, interviewed tree times each, we see these results as quite surprising and great evidence that the existing technologies are not enough in order to facilitate lack of social interaction.

In order to facilitate social interaction we believe that companies should implement more virtual meetings and build in functions in every technology used by the company, which enables employees to interact with each other continuously, regardless of time and location. We argue that using camera in all programs can reduce the distance between people, because consultants are able to see their colleague or customer in every work related situation. Consultants should not miss out the social environment due to mobile working.

IT companies should invest in more advanced virtual programs, for example as a system that works as a monitoring portal, meaning that the consultants can see each other and their important contacts continuously and independently, at any time during normal working hours. The purpose of this kind of portal is to facilitate communication between the employees and colleagues, ease and manage important meeting spaces. Important to note is that consultants can also reduce stress and other mobile implications by having access to laptop, smartphone and mobile broadband, through these technologies consultants can regulate their own information flow and redirect customers to voice mail or turn off the smartphone after working hours. Nigel et al. (2011) emphasize that social interaction make it possible to; share information, make decisions, generate ideas, resolve problems and socialize, we argue that the monitoring portal should consist of all these
features in order to support social interaction (Nigel, et al., 2011). Based on Table 4, the consultants ranked social and professional isolation in third place out of ten implications, which was quite unexpected, since the consultants indicated that they already have good cohesiveness with colleagues and their customers by being part of different activities and social meetings. Based on the third interview, we argue that the implication of social and professional isolation cannot be solved indirectly, because it refers to a more personal level. The consultants themselves decide to which extend they want to be social and how they want to communicate. We argue that this implication can be solved to a small extend by the company if organizing more activities, but we believe that more personal involvement is needed by the consultants themselves in order to facilitate the mobile working.

The implication of higher demands of constantly being reachable means that colleagues and customers can reach the consultants either during work or after work. According to the consultants it is something self-modifying, because the consultants decide themselves how reachable they want to be. In order to solve this problem consultant’s can align their technology and avoid being interrupted by switching the smartphone on silent mode or redirecting different calls to voice mail and then listen to them when suited. If the consultants are not reachable during a vacation or other situation, they can create an “out-of-office” that notifies the sender that he or she will respond to the email when available.

Based on our interviews it is clear that the consultants modify different technologies in order to facilitate the interaction with customers and colleagues. They are reachable through the use of smartphone; laptop and Internet, where they stay connected via mail, sms, net-meeting, teleconference, Lync and shared desktop. The calendar function available on the smartphone or the laptop reminds the consultants of important meeting and what to do. Following technologies will enable the consultants’ mobile work and with the opportunity to meet virtual and facilitate the social interaction.
7 CONCLUSION

This chapter will present the conclusion drawn from the theory and empirical data for this study. The chapter also answers the problems and implications that led to the thesis together with a presentation of the results from the case studies.

7.1 HOW DO MOBILE TECHNOLOGIES ENABLE SOCIAL INTERACTION IN CONSULTANCY WORK?

The perceived implication in mobile working is social interaction according to the consultants. Based on the results, it is obvious that the main obstacle to an increased average degree of mobility is social interaction. Social interaction is the strongest argument in the performed case studies. There is no longer a requirement to come to the office to work or participate in meetings because today’s consultants are spoiled with various technologies such as net-meeting, Skype etc. Based on case studies, the authors have concluded that there are technologies that can facilitate the mobile work of consultants.

The company’s main purpose is no longer to only provide the employees with a good working place, thus with the right use mobile technologies and new opportunities to work outside the office and maintain and support the social interaction. The consultants see today the office more of a place for social gathering and this development can be achieved thanks to the technology that facilitates mobility and the consultants’ mobile way of work. A consultant with the access of the three technologies, laptops, smartphone and mobile broadband, has every opportunity in the world to be mobile regardless of time and location. This means that today’s mobility is going towards the right direction and towards new heights. There is no work-related reason for consultants to traditionally return to the company’s office at the end of the week, however, the office place is still seen as a very popular and social place by the consultants.

Despite all the benefits of development, it is important to remember that the more mobile the consultants become, the more important it is to have good technology that supports mobility so the consultants can spend less time in the office. Based on this study, we have despite some facilitated technology reached the final conclusion that today’s technology has failed to satisfy the consultants’ social needs and that there are significant implications that can result in loneliness, less efficiently etc. As mentioned earlier, below are the implications pointed out in the case studies:

• Lack of social interaction
• Social and professional isolation
• Higher demands of constantly be reachable

The above implications can be avoided/solved by implementing/developing the suggestions below:

Lack of social interaction

Using a camera in all programs to reduce the distance between people can solve this. It can increase the communication by seeing your colleague or customer whenever you’re working with him/her. The monitoring portal is also a great way
to facilitate and increase the social interaction because the consultants can see all their colleagues and contacts independently, at any time during normal working hours (8-17).

**Social and professional isolation**
Implementing more social activities, after-works, and company parties can solve this implication. It cannot be solved indirectly, because it refers to a more individual level, as the consultants themselves decide how much social communication and social contact they want.

**Higher demands of constantly be reachable**
This implication requires some sort of individualized work patterns and self-adjustment of the consultants’ mobile work. The consultants have to control over how they want to be reached and interact by aligning their technology in order to meet the customers’ needs in the best possible way. Through the use of smartphones, laptop, mobile broadband and social media the s can stay connected and be reachable in the right way.
8 DISCUSSION

This chapter discusses the choice of method and how it obtains validity and reliability. The chapter will also present recommendations for future studies.

8.1 CHOICE OF METHOD AND COMPANY

The choice of companies in the case studies was to find three companies that matched this study. The authors chose NaviPro because it is a small local based company with good cohesion and few consultants. NaviPro is considered as small company in this study. The authors chose Sogeti because it is a company on an international level, with many employees. They are considered as a medium sized company with quite a lot of employees. Logica was chosen because it is a global company with thousands of employees around the world. In this study, it is considered as a very large company.

The authors chose to conduct a qualitative method because they believed it was the most appropriate method for this study, they also found that this was the most appropriate way for them to develop an understanding of what the problem was and what had be done to solve them. Thanks to the qualitative method, the authors have succeed in creating an understanding of each interview and then made decisions whether to conduct further interviews or not.

Even the choice of the consultants interviewed has affected the results. The interviews conducted have been with consultants in each of the three companies to learn about their way of working, learn about what technology they use in order to enable social interaction and what implications mobility has. A CEO was also interviewed in order to get an overall view of mobility and gain different perspectives of mobile technologies and how these can facilitate social interaction compared to the consultants.

8.2 EVALUATION OF RESULTS

Validity

During the study, the authors made use of the method presented in Chapter 2. The authors believe that everybody in the study have been relevant in the subject area in which the results of the study have been processed step by step from the different parts of the essay. The method along with answering of the research questions have guided the authors throughout the study and created a high validity of the final result. The results of the empirical study has been illustrated in the analysis, which means that no comparison between the companies have been made, this means that the contradictions of the companies in between are not considered in the analysis or conclusions, however, the authors focused on the comparison between the consultants and based the results on what each answered individually. The authors believe that they have managed to acquire material to make a credible interpretation of the analysis. This study presents a qualitative approach to the assessed in validity and reliability in an efficient manner.
Reliability
The authors have followed the approach presented in Chapter 2, Method, which means that the reader can deduce the result. The selected sources that the authors have used in the study have been used to generate the theoretical framework for an understanding of the empirical part of the study. The varieties of theoretical sources are all chosen with high validity because they were written by recognized practitioners and researchers. All the interviews in the empirical study where documented by using a Dictaphone. The interviews were recorded on a tape with very good quality, resulting in the conveyed information was ensured in a reliable manner. The information conveyed to them has been quite adequate to interpret and analyze the study’s purpose and to answer the research questions.

8.3 RECOMMENDATIONS FOR FUTURE STUDIES
This thesis presents the methodology and technology consultants use to facilitate their mobile way of working, but also what implications and drawbacks there is in mobility. The result was:

Technology that facilitates consultants’ mobility:
• Laptops
• Smartphones
• Mobile Broadband

Implications that impair consultants’ mobility:
• Lack of social interaction
• Social and professional isolation
• Higher demands of constantly be reachable

This result is based on six consultants who were interviewed three times each. So the authors have completed a total of 18 interviews with high validity and reliability. It would be interesting to implement the same study but with more consultants to see how much the result differs in percent between the tools, it would also be interesting to measure the implications with more consultants to see if everyone experiences the same issue. More extensive studies behind the developed method to measure the mobility would be good, possibly by more quantitative elements in order to increase the validity of the percentage of each tool and thus achieve a generalizability of a percentage in the different tools. The implications should be substantiated and investigated with research and study of the quantitative character to ensure the results further and achieve a better generalization. In addition to a presentation of how the mobility affects consultants, it may also be useful to study how mobility can affect the company in various ways. In a larger perspective, mobility, for example, affect the company’s environment, or business processes, depending on how their employees are working mobile. Further research on the company benefits in mobility is therefore relevant. The result’s relevance is limited in time, because of the constant development in the IT business and the rapid technological change. This thesis is based on the market situation in 2012. The working method of this thesis has used is applicable to future investigations.
9 REFERENCES

9.1 Written references


9.2 Electronic sources


- 63 -

9.3 Verbal references
Respondent 1: CEO: Thomas Molin, NaviPro, 2012-03-11
Respondent 2: Anna Ekdahl, NaviPro, 2012-03-11
Respondent 3: Teo Barbu, NaviPro, 2012-03-11
Respondent 4: Peter Arvidsson, Sogeti AB, 2012-03-06
Respondent 5: Mikael Lindgren, Sogeti AB, 2012-03-06
Respondent 6: Madeleine Åkesson, Logica, 2012-03-12
10 Appendix

10.1 Interview question – Thomas Molin, CEO

Name: 
Company: 
Date: 

1. What are your tasks in the company?

2. How long have you worked for the company?

3. What do you consider to be the greatest efficiency with mobile working?

4. What tools do you use today, and how can these be streamlined?
   4.1. Do you use any specific methods or procedures, which ones?

5. How many of your consultants use cell phones and laptops?

6. What do you consider to be the greatest efficiency of having mobile phone and laptop?
   6.1. Are you using any particular brand?

7. How many employees use mobile broadband?
   7.1. How do you take advantages of the mobile broadband? (E-mail, corporate intranet, enterprise business, communication with customers?)
   7.2. Do you have WiFi at the office? (What speed)

8. Can everyone connect externally to the company and access folders and documents?
   8.1. Is the access through Remote Desktop or is your system web-based, VPN, etc.?

9. How do you work for the company to be more mobile?

10. Do you lack in any technology today?

11. How mobile do you think you are, or have the technical possibility to be?

12. How effective do you consider yourself to be today, because of mobility compared to five years ago?

13. Has working hours per consultant increased or decreased over the past five years?
14. Has the travel time per consultant decreased or increased over the past five years?

Is it okay that we use your name and your company name in the thesis, or do you want to be anonymous? Finally, if there are any follow-up questions during the analysis, it is okay to contact you again?

**10.2 Interview questions 1 - Consultants**

Name:  
Company:  
Date:  

1. What are your work tasks in the company?

2. How long have you worked for the company?

3. What does mobility mean for you?

4. How long have you worked mobile?

5. What tools do you use today, and how can these be streamlined?  
   5.1. Do you use any special methods or procedures, which ones?

6. How mobile do you think you are, or have the technical possibility to be?

7. Do you consider yourself to be more effective today because of mobility, compared to five years ago?

8. Can you allocate from 1-10 (10 being most important) these eight tools for what you believe is the most important in your mobile working?

<table>
<thead>
<tr>
<th>Technologies</th>
<th>Max score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile phones</td>
<td></td>
</tr>
<tr>
<td>Laptops</td>
<td></td>
</tr>
<tr>
<td>Smartphones</td>
<td>4</td>
</tr>
<tr>
<td>Mobile Broadband</td>
<td>5</td>
</tr>
<tr>
<td>Remote Access</td>
<td>6</td>
</tr>
<tr>
<td>Videoconference</td>
<td>7</td>
</tr>
<tr>
<td>Teleconference</td>
<td>8</td>
</tr>
<tr>
<td>Net-Meeting</td>
<td></td>
</tr>
</tbody>
</table>

**Degree of Mobility:**
9. How functional do you consider yourself to be when you work outside the office?

10. How much time do you think you save by working in the office compared to working mobile?

11. What is the time difference between working in the office, compared to working mobile? (Number of hours / minutes)

12. What change in efficiency do you think you've gone through because of mobile way of working?

13. How much free time you earn in minutes per day because of a mobile working?

14. Has working hours per consultant increased or decreased over the past five years?

15. If there was a specific increase / decrease, what year?

16. Have the travel time per consultant decreased or increased over the past five years?

17. What do you think is the main difference between working mobile or in the office?
18. How can you streamline your mobile work today?

19. Do you want to add anything further?

Is it okay that we use your name and your company name in the thesis, or do you want to be anonymous? Finally, if there are any follow-up questions during the analysis, it is okay to contact you again?

10.3 Interview questions 2 - Consultants

Name: 
Company: 
Date: 

1. What is Social Interaction for you?

2. How is mobility influencing the social interaction?

3. How is the social interaction affected when working at the office?

4. How do you influence the social interaction at the office?

5. How is the company influenced by the social interaction at the office?

6. How does the social interaction influence your mobile work?

7. Do you feel that the interaction between you and your colleagues is reduced and affected by your mobile work?

8. How can the interaction between you and your customers be facilitated?

9. Which mobile technologies do you consider support the interaction between your colleagues regardless geographical location?

10. What mobile technologies do you consider support the interaction between you and your customers regardless of geographical location?

11. How does the social interaction affect your feelings? Do you feel loneliness, isolation, lack of affection?

12. Today's consultants have higher demands of constantly be reachable. How does it affect you?
13. Do you feel that you encounter the following implications when working in the office?
   - Misunderstanding between you and your customers
   - Lack of productivity
   - Lack of effectiveness
   - Interruption at work

14. Do you encounter any of the following implications when you work outside the office?
   - Lack of social interaction
   - Higher level of stress
   - Limited access to resources
   - Lack of face-to-face interaction
   - Lack of productivity

15. How do you think the following implications can be avoided?

16. How do the implications influence your work? How do you avoid them?

17. What are the implications of constantly being reachable?

18. Rank the following implications from 1-10 (1 being most common).

<table>
<thead>
<tr>
<th>Implications of mobility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Reduced productivity</td>
</tr>
<tr>
<td>2 Limited access to resources</td>
</tr>
<tr>
<td>3 Social and professional isolation</td>
</tr>
<tr>
<td>4 Lack of social interaction</td>
</tr>
<tr>
<td>5 Longer working hours</td>
</tr>
<tr>
<td>6 Higher level of stress</td>
</tr>
<tr>
<td>7 Higher demands of constantly being reachable</td>
</tr>
<tr>
<td>8 Lack of secure information</td>
</tr>
<tr>
<td>9 Limitation of technical equipment's and services</td>
</tr>
<tr>
<td>10 Cost implications</td>
</tr>
</tbody>
</table>

10.4 Interview question 3 – Modification of technology

Name:
Company:
Date:
15. To constantly be reachable means that clients and colleagues can reach you at anytime, either during work or after work. How do you modify your technology to avoid being interrupted and contacted when you are busy?

16. How do you modify your technologies (cell phones, computer, software, systems, etc.) to facilitate your work fully?

17. What can be done to facilitate the interaction with your clients and colleagues?

18. What can be done to avoid the implications in mobility?

19. How can we solve the problem with social interaction?
Högskolan i Borås är en modern högskola mitt i city. Vi bedriver utbildningar inom ekonomi och informatik, biblioteks- och informationsvetenskap, mode och textil, beteendevetenskap och lärarutbildning, teknik samt värdvetenskap.

På institutionen Handels- och IT-högskolan (HIT) har vi tagit fasta på studenternas framtida behov. Därför har vi skapat utbildningar där anställningsbarhet är ett nyckelord. Ämnesintegration, helhet och sammanhanget är andra viktiga begrepp. På institutionen råder en närhet, såväl mellan studenter och lärare som mellan företag och utbildning.

Våra ekonomiutbildningar ger studenterna möjlighet att lära sig mer om olika företag och förvaltningar och hur styrning och organisering av dessa verksamheter sker. De får även lära sig om samhällsutveckling och om organisationers anpassning till omvärlden. De får möjlighet att förbättra sin förmåga att analysera, utveckla och styra verksamheter, oavsett om de vill ägna sig åt revision, administration eller marknadsföring. Bland våra IT-utbildningar finns alltid något för dem som vill designa framtidens IT-baserade kommunikationslösningar, som vill analysera behov av och krav på organisationers information för att designa deras innehållsstrukturer, bedriva integrerad IT- och affärsutveckling, utveckla sin förmåga att analysera och designa verksamheter eller inriktas sig mot programmering och utveckling för god IT-användning i företag och organisationer.

Forskningsverksamheten vid institutionen är såväl professions- som design- och utvecklingsinriktad. Den övergripande forskningsprofilen för institutionen är handels- och tjänsteutveckling i vilken kunskaper och kompetenser inom såväl informatik som företagsekonomi utgör viktiga grundstenar. Forskningen är välrenommerad och fokuserar på inriktningarna affärsdesign och Co-design. Forskningen är också professionsorienterad, vilket bland annat tar sig uttryck i att forskningen i många fall bedrivs på aktionsforskningsbaserade grunder med företag och offentliga organisationer på lokal, nationell och internationell arena. Forskningens design och professionsinriktning manifesteras också i InnovationLab, som är institutionens och Högskolans enhet för forskningsstödjande systemutveckling.