Keeping knowledge within an organisation

A study of distributed knowledge management

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Abstract
Knowledge management is considered as a way of gaining competitive advantage for organisations and research has for quite some time been addressing its challenges. The purpose of this study is to create deeper insights and understanding of how a multinational organisation handles knowledge management while working in a distributed manner. Our research question is thereby: How are knowledge management and sharing practices handled by distributed work arrangements at a multinational organisation? In this qualitative case study interviews and observations were performed. Our findings show that relationships between members, tasks and tools exist in our studied organisation and are handled in different ways on different levels. Furthermore another relationship was found, culture, which affected knowledge management. This thesis contributes to knowledge management research by adding an extra dimension to an existing framework. We also add deeper insights and understanding of how distributed work arrangements are handled within knowledge management.

Keywords: Knowledge Management, Knowledge Transfer, Knowledge Sharing, Distributed Organisations
1. Introduction

Over several years knowledge workers and the knowledge itself have been key components for organisations to thrive and evolve. It has been established that in order for organisations to stay updated and in the forefront of a competitive edge they have to maintain, develop, organise and utilise the employees’ knowledge (Grönhaug & Nordhaug, 1992). Since knowledge can be hard to capture and is often said to reside within individuals the need to manage and use knowledge within an organisation has become more and more important for organisations (Holste & Fields, 2010).

Knowledge can reside within an organisation in three basic repositories: members, tasks and tools. Members are the human factor within an organisation and have the social components that come from interactions. Tasks are the strategies and organisational goals that steer what should be done and how things should progress. The tools repositories are what tools an employee needs to perform their daily work and both software and hardware are included. (Argote & Ingram, 2000)

However, in this case managing knowledge is the most common way organisations can make use of all the internal knowledge, in other words implementing a knowledge management strategy. There are also different components of such a strategy where sharing or transfers of knowledge between individuals are two of them. Knowledge sharing is said to be one of the most important factors where individuals should feel natural about sharing knowledge with their co-workers and by extension the entire organisation. (Riege, 2000)

Knowledge sharing and knowledge transfer are two similar terms that are used in knowledge management research. However, sharing of knowledge is an activity that has the purpose of being beneficial to another employee at the firm. Knowledge transfer can be illustrated by the following quote: “Knowledge transfer in organizations is the process through which one unit (e.g., group, department, or division) is affected by the experience of another.” (Argote & Ingram, 2000, p. 151). Furthermore IT is an integral part of daily operations for most organisations today. Working with IT is something that has its own set of obstacles and possibilities (Ägerfalk & Fitzgerald, 2006, Herbsleb & Moitra, 2001). Riege (2005) states that IT can cause barriers to managing knowledge if it is not used properly.

Another trend we have been seeing more of lately is organisations spreading to more than one country. This procedure is called having a distributed organisation or distributed teams where teams within an organisation are separated geographically. (Ägerfalk, Fitzgerald, Holmström, Lings, Lundell & Conchúir, 2005)

In previous research many authors have been addressing the issue with managing, sharing and transferring knowledge within organisations (e.g. Argote & Ingram, 2000; Mårtensson, 2000; Argote, Ingram, Levine & Moreland, 2000; Riege, 2005; Drath, 2006; Ismail-Alawi, Yousif Al-Marzoqi & Fraidoon Mohammed, 2007; Argote, 2013) whilst less attention has been focused on qualitative studies on distributed multinational organisation. A qualitative approach can uncover how an organisation perceives and handles knowledge management and gains greater insights and understandings. If this insight is underexplored barriers to knowledge management can emerge.

However, our interest for possibilities and obstacles associated with knowledge management made us want to investigate how distributed multinational organisations
handle this phenomenon. This interest led us to contact organisations that we saw suitable for our study. The one we ended up choosing as our study object was Vattenfall. We performed a qualitative case study where we focused on knowledge management and knowledge sharing/transfer practices through the lens of Argote and Ingram (2000) where the components members, tasks and tools were reviewed.

1.2 Research question
It has become more widely spread to have a distributed organisation due to our globalised world market. In a time where individuals’ knowledge provides many of the competitive advantages for firms, a huge turnover of employees can cause issues. To address such risks many firms are implementing knowledge management strategies. In the long run these strategies strive to become cornerstones for knowledge within the organisation. Distributed work within a multinational organisation complicates management of knowledge. Therefore the purpose of this study is to create deeper insights and understanding of how a multinational organisation handles knowledge management while working in a distributed manner. Research have focused on general knowledge management issues, however, a qualitative approach can augment insights and attitudes within this field of research. In order to investigate this phenomenon we will highlight common knowledge repositories to be able to find how knowledge management is affected by different relationships. Therefore it is interesting to examine the effects on knowledge management in a distributed context. This brings us to our research question:

How are knowledge management and sharing practices handled by distributed work arrangements at multinational organisation?

The thesis is structured as follows: First an introduction to the thesis is presented followed by a positioning with related research and a presentation of our theoretical framework. This is followed by our choice of method and the implications of using our chosen method. After that section we present our results and an analysis of the results with a consecutive discussion. We conclude the thesis by stating our contributions and suggestions for further research.

2. Related research
In order to position our work within the knowledge management research field related research has been processed and some main aspects will be presented below. To clarify the subject to the reader we will describe how knowledge is defined and continue with knowledge management, knowledge transfer, knowledge sharing, trust and distributed organisations. Lastly for this section we will present the theoretical framework that will be used to analyse our results.

2.1 Data, Information, Knowledge
When does data become knowledge? Stated in Lee & Chen (2012) s literature review the top cited knowledge management article is written by Alavi & Leidner (2001), which is cited over 7300 times. Alavi & Leidner (2001) states that knowledge can be viewed from six different perspectives where one standpoint would be that (1) data is facts and raw numbers, moving
to information where data is interpreted and processed and knowledge is when information is internalised and personalised. And (2) where knowledge is a state of mind and “Knowledge is the state of knowing and understanding” (Alavi & Leidner, 2001, p. 111). Also where (3) knowledge is seen as an object that can be stored, retrieved and modified. (4) Knowledge as a process of applying expert skills. (5) Access to information is viewed as a condition for knowledge. And last knowledge as a capability (6) where knowledge is viewed as the potential to affect action. In this thesis we combine these six perspectives and define knowledge as both tacit and explicit, with equal importance. There is a risk of assuming that tacit knowledge is more important than explicit knowledge when there might be support for both types to be an advantage for firms. The two types are not dichotomous and can be viewed and used in different ways. Tacit knowledge serves as a backdrop for using and structuring explicit knowledge (Polanyi, 1975). In order to have tacit knowledge as a backdrop for explicit knowledge there is a need for a shared knowledge space for person A to understand person B when sharing knowledge (Ivari & Linger, 1999; Tuomi, 1999). This can be viewed as absorptive capacity (Argote, 2013) but the capacity of individuals differs between individuals. Dynamic learning is a third type of learning where tacit and explicit knowledge is combined and comes from an individual interacting with internal or external environments of an organisation, in other words one can say that an individual can learn through doing something (Drath, 2006).

2.2 Knowledge management

Knowledge management is a widely used strategy in order to achieve advantages both internally but also externally as competitive advantages (Mårtensson, 2000; Argote et al., 2000; Riege, 2005; Ismail Al-Alawi et al., 2007). Several companies today are harvesting the benefits of managing, sharing and transferring knowledge within the company but also infusing the organisation with external knowledge, in a positive sense (e.g. Evans, Dalkir & Bidian, 2014; Holste & Fields, 2009; Argote & Ingram, 2000). One of the benefits of knowledge management is that the organisation becomes less dependent on individuals (Riege, 2005). However, the “conversion” from tacit to explicit knowledge is not easy and there are pitfalls to be avoided when embarking on a knowledge management journey. Several authors (Mårtensson, 2000; Argote et al., 2000; Riege, 2005; Ismail Al-Alawi et al., 2007) have pinpointed risks and opportunities with knowledge management strategies that need to be taken into account by organisations. Such risks and opportunities are affected by the organisational, individual or technological nature of companies (Riege, 2005).

Both practitioners and researchers can apply one or more out of several frameworks (e.g. Ernst & Young, 1999; Argote & Ingram, 2000; Skandia, 1999; Wiig; 1993) to describe and interpret risks and opportunities related to knowledge management. Since there are several definitions and views on knowledge management one can say that at a minimum knowledge management strategies consist of creating, storing/retrieving, transferring and applying knowledge (Alavi & Leidner, 2001). The objectives of effective knowledge management are to make an organisation to act intelligently to secure success and viability and realize the best value of the organisation’s knowledge assets (Wiig, 1997). Two aspects of knowledge management that have to be taken into consideration are knowledge transfer and knowledge
sharing. The two terms Knowledge Transfer and Knowledge Sharing are used interchangeably by different researchers (e.g. Bock, Zmud, Kim & Lee, 2005; Argote & Ingram, 2000; Szulanski, 2000). In order to understand how the terms are used we will below try to define them both to point out how they are used in this thesis.

**2.3 Knowledge transfer & knowledge sharing**

A definition of knowledge transfer is that it requires interactions between people, or a group of people, that share knowledge to reach a common goal (Ismail Al-Alawi, 2005; Syed-Ikhsan & Rowlands, 2004). In another way Gupta and Govindarajn (2000) describe knowledge transfer (knowledge flows by their terminology) through five different elements. (1) The value of knowledge a source is perceived to have, (2) the source’s motivation to share knowledge, (3) the transmission channels available, (4) the receiver's motivation to acquire knowledge, and (5) the receiver's absorptive capacity. The fifth element is defined in the sense of Choen & Levinthal (1990) were the absorptive capacity also involves usage of knowledge.

Furthermore, Knowledge sharing is another widely used concept within knowledge management research and is recognised as one person guiding another person through their thinking or using their own insights to complement the other person's way of perceiving the situation (McDermott, 1999). In the following thesis we use knowledge transfer as an activity of transferring knowledge from one individual to another. Knowledge sharing is used in more of a broadcasting sense where the recipients might differ and the sender might not know every affected recipient. An important factor for interaction between recipients is trusting one’s co-workers (Swift & Hwang, 2013; Sankowska, 2013).

**2.4 Trust**

Porter, Lawler and Hackman (1975, p. 497) describes the problematic task of defining trust as “When it comes to specifying just what it means in an organizational context, however, vagueness creeps in.”, and many have tried to specify different kinds of trust. Renzl (2008, p. 210) describes that trust for management is an important factor to take into consideration in the question of knowledge sharing, she claims that “trust in management reduces one's fear of being betrayed, being deceived, or of being easily replaceable”. McAllister (1995) has empirically developed and tested two types of trust where one is cognitive trust and the other is affective trust. Cognitive trust is based in co-worker competence and reliability where affective trust is based in a mutual care and concern between co-workers. Trust has been defined as the willingness of an individual to put oneself in a position of potential vulnerability to someone else (Dodgson, 1993; Huang and Vliert, 2006; Edelenbos and Klijn, 2007)

Riege (2005) states that rigid hierarchies where management want to have control over their employees are affecting sharing of knowledge in a negative sense. Swift and Hwang (2013) also describe that trust is important for sharing and using intrapersonal knowledge. Further Renzl (2008) argues that fear of losing unique value as an individual negatively impacts knowledge sharing. Orlikowski (1992) begins to touch upon this subject when describing how a competitive culture within an organisation can impede on sharing information and cooperating with co-workers. At a multinational organisation work outside
of national boarders can be seen as challenging for information sharing and is affected by trust (Ågerfalk et al., 2005).

### 2.5 Distributed work arrangements

Ågerfalk et al. (2005) identify that distances have an effect on teams and organisations that work across national borders. These distances are temporal, geographical and socio-cultural and have an impact on the team members within an organisation. The temporal distance is the time difference between the two parties wishing to interact. Geographical distance is measured by the amount of effort it takes for one party to visit the other. Lastly the socio-cultural distance measures the understanding an actor have for the others customs and traditions. Since we have a more globalised world today more and more companies take on a multinational approach and acquire subsidiaries in other countries than the original company (Herbsleb & Moitra, 2001). However, distributed work can be performed within the same nation but with a geographical distance (Ågerfalk et al., 2005).

While much have been written about knowledge management in general (e.g. Wiig, 1997; Argote & Ingram, 2000; Mårtensson, 2000; Argote et al., 2000; Alavi & Leidner, 2001; Riege, 2005; Ismail Al-Alawi et al., 2007; Renzl, 2008) little attention have been paid to qualitative approaches concerning knowledge management studies along with distributed multinational work.

### 2.6 Theoretical framework

The theoretical framework used for this study was created by Argote & Ingram (2000) which in turn is influenced by previous research (Argote, 1999; Argote & McGrath, 1993; Arrow, McGrath, & Berdahl, 2000; Levitt & March, 1988; McGrath 1991; Starbuck, 1992; Walsh & Ungson, 1991). The choice of using this particular framework was taken because Argote and Ingram's (2000) framework is the most cited framework within the field of knowledge management. Argote and Ingram (2000) states that knowledge is embedded in three repositories within a company, where (1) Members consist of the human individuals that reside in the organisation, (2) Tools are technological tools at hand for the members and (3) Tasks are the goals, strategies, purposes and intentions of the organisation. These three main repositories create subnetworks in said organisation where member-member networks are of a social character. Task-task networks are routines which are used in the organisation. Tool-tool networks are the technology structure combined to be used in the company. Furthermore we have member-task networks or the division of labour which points out what member performs what task. Also member-tool networks contain the tools which the members are using. Another network is the network that contains which tools are used for what tasks. Finally the network member-task-tool handles the question of which members do what tasks and with what tools (Argote & Ingram, 2000). In order to visualize the relationships we have created a figure below. This visualization will also help us in the analysis phase and will ease the reader's understanding of the framework.
According to the framework, performance for the organisation increases when these networks work well both on their own but also in synergy with each other (McGrath & Argote, 2004). To state an example we can see that if a member has tools to perform a task appropriately the member-task and the member-tool networks are compatible with each other. If the most competent member is assigned to an appropriate task the member-task network is functioning well. These two examples show that the former is an external compatibility and the latter an internal compatibility and also illustrates how the framework present and view the relationships between the networks. (Argote & Ingram, 2000)

3. Research design

Every study needs some kind of design and approach in order to facilitate for the reader and the researcher. If a study is performed without such a structure results and contributions might be hard to present and interpret (Bryman, 2011). The following section will present our research approach, research case, data collection, sampling, data analysis, ethical aspects and finally a discussion of the chosen methodology.

3.1 Research approach

The qualitative research approach can be beneficial for studying smaller samples and receive deeper understandings of the studied context. This approach can also identify emotions, experiences, perceptions and other aspects that are perceived by the individual. Qualitative methods have a different approach than quantitative approaches where the second can reach
a higher generalizability and analyse larger populations. There is also a point of quantitative methods for creating broader pictures of the studied phenomenon. (Bryman, 2011)

However, in regard to our focus and research question a qualitative approach is most appropriate for investigating how knowledge management is handled.

3.2 Research case
Vattenfall is one of Europe’s largest power companies and is owned by the Swedish government. Their main products are electricity, heat and gas. In order to support their main functions within electricity, heat and gas they are in need of different IT solutions. The IT department of Vattenfall was about to launch a project with the intentions of promoting knowledge management practices within the department. The project was in an initiation phase and the project manager was still gathering information about the knowledge management field. The project has a timespan of two years and will be implemented initially for a test team. Vattenfalls IT department is a multinational organisation with employees in Sweden, Germany, the Netherlands and the United Kingdom. The sub-department we got access to is responsible for production and distribution solutions which support vital functions for Vattenfall and are the home to about 100 employees. An initial meeting enriched us with the picture of Vattenfall ITs approach towards knowledge management. This gave us a good view of what Vattenfall wanted to gain from our study which was in line with our scope.

3.3 Data collection
The study was conducted at Arenastaden, Solna, at Vattenfalls headquarters. Our field study took place at Vattenfalls IT department for production and distribution solutions with a focus on members, tasks and tools that Argote and Ingram (2000) argue are repositories of knowledge. To be able to investigate the case both interviews and observations were chosen as data collection methods. Semi-structured interviews were used in order to gather data regarding employees’ perceptions, experiences and attitudes of knowledge management (Yin, 2007). Observations were used as a supplementary help to get a holistic view of knowledge management activities at Vattenfall IT (Bryman, 2011).

Ten interviews were performed where seven of them were conducted face-to-face and the other three were telephone interviews with Vattenfall employees in Germany. Several observations were made throughout our visit at Arenastaden where field notes were taken. Both researchers were present at each observation occasion and both of us took our separate field notes. In between interviews we continuously took notes and observed how the members of the organisation acted and interacted with each other. There were also occasions where we had the opportunity to join some of the employees at lunches or coffee breaks. Our field notes consisted of remarks in accordance to the knowledge repositories members, tools and tasks where we gathered data about what we observed. In total we spent about 2 weeks on site at Vattenfalls headquarters. All of the interviews were recorded by mobile phones and we chose to use two mobile phones to prevent any technical issues that might occur. The main reason of recording the interviews were to facilitate transcription but also to give the respondents our undivided attention. However, some field notes were taken during the interviews to complement or highlight how the respondent used their body language or
gestures to facilitate the transcription process. Face-to-face interviews were held at Vattenfall headquarters to maintain a natural environment for the respondents. We chose to perform the interviews in conference rooms in order to get more privacy. The material was transcribed throughout the fieldwork to keep our memory intact and vivid. According to Bryman (2011) this is an important step in order to capture how a respondent answers a question and not only what words they were using. Due to this our interview technique could be improved throughout the process. The field notes from observation occasions were reviewed by both of us during our visit in Solna and we read through each other’s notes to gain better understanding of how we perceived interactions and actions between members. This also improved our field note practice throughout our field study.

3.4 Sampling
A goal-oriented sample was used for this study, Bryman (2011) describes this as choosing organisation, people, documents etcetera, in order to achieve a direct link towards the research question stated for a study. Due to the availability and acceptance of our thesis proposal and the newly started project about knowledge management this goal-oriented sample has been used. In addition Bryman (2011) mentions that many qualitative studies use this kind of sampling to be able to create a situational reflection of the studied phenomenon. Our respondents had different roles which facilitates illustration of different perceptions and experiences within the department. A wide variety of roles were interviewed and observed to create more of a fair picture of the situation. This could not be illuminated by only interviewing and observing a few individuals or roles. Consequently roles such as managers, solution experts, project managers and system managers were interviewed and observed in order to investigate how knowledge management works from multiple angles.

<table>
<thead>
<tr>
<th>Role</th>
<th>Abbreviation</th>
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<tr>
<td>Upper level management</td>
<td>UM</td>
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<tr>
<td>Middle level management</td>
<td>MM</td>
</tr>
<tr>
<td>Employee level</td>
<td>EL</td>
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*Table 1. Role list.*

In order to clarify what role a respondent has we clustered them into three role levels and assigned each level an abbreviation. This was done to prevent identification of our respondents’ identities but also facilitate reading of our results.

3.5 Ethical aspects
Within a case study it is important to have in mind that the case at hand can be affected by the researchers studying the phenomenon (Bryman, 2011). The recommendations of Vetenskapsrådet (2011) have been followed throughout the study to maintain a high ethical standard. These recommendations includes: (1) the respondent are completely anonymous. (2) The information gathered has only been processed for the sake of the study. (3) The names of all respondents have been anonymized to prevent identification of individuals. (4) The respondent was given the opportunity to at any time choose to not participate or abort the
The participation of the interviews was completely voluntary and nothing was forced upon the respondent. Even after the interviews were conducted the respondent can contact us to have their interview exempted from the study. None of the information acquired were used for anything else than to the purpose of the study. Neither was the information to be available for the public. However, the work title or age of a respondent might be included in the transcripts of the interviews to facilitate the work. The respondents got this information at first via an email that were sent a couple of weeks before the actual interviews and also at the beginning of each interview.

3.6 Data analysis
Kvale and Brinkmann (2009) states that analysis of the data material starts at the transcription process which also was considered. Consequently everything the respondents said was transcribed apart from recurrence of words and fillers. We used a qualitative content analysis approach in order to guide us throughout our data analysis (Bryman, 2011). In total 126 pages was produced during transcription. To avoid differences in the transcription material we read all the material the other researcher produced while listening to the interviews. After the transcriptions, the material was printed and initial codes created individually. The transcription phase was followed by coding where 349 codes were identified. By using an Excel sheet with each code on one row we could create a more manageable data material. Since we have been two researchers coding the interviews, differences in codes or our thoughts might have differed. This was averted by reading the other researchers codes. The initial codes were then clustered creating 14 different themes e.g. lack of time, hierarchy and networking. The material from our observations were also coded and then placed within the 14 different themes that emerged from analysis of the interviews. Therefore, the themes from that point combined both interview and observation data to create better content within each theme. Furthermore an assigning process was done where themes were connected to the different knowledge repository relationships. The assigning of themes was done on the basis of Argote and Ingrams (2000) framework.

3.7 Method discussion
Using semi-structured interviews as compared to a more open interview structure can cause respondents to be controlled by the questions and not speak as freely (Bryman, 2011). However, our approach to the interviews was more of a guided conversation rather than a structured interview (Yin, 2007). Follow-up questions were asked in the cases where respondents seemed to have their heart of interest and these answers had potential to be valuable for our study. Recording an interview can hamper a respondent and it can make the interviewee feel uncomfortable (Bryman 2011). To make the interviewees feel more comfortable we thoroughly explained the ethical guidelines by Vetenskapsrådet (2011) and before each interview we small-talked to them about trivial matters. When observations are used an issue of different interpretations might arise. To address this issue and increase reliability we both performed the same observations as recommended by Yin (2007). Our ontological preconceptions as researchers may affect how we interpret what we come across during the case study. This has been taken into consideration during the entirety of this study. Yin (2007) describes that the respondents might be affected by the researchers mere
presence and act or answer accordingly to what they believe the researcher want to know. This is hard to address and is difficult to control. However, ethnographic researchers try to accommodate to this issue by extending the fieldwork over a longer period of time and becoming more of a member within the studied context to gain members trust (Atkinson & Hammersley, 2007).

Since we chose two ways of data collection, interviews and observations, we were able to create a better holistic view of how the phenomenon actually occurs. A respondent can say one thing and do another which indicates a discrepancy in action compared to what was stated in interviews. To avoid false statements from interviews we chose to include observations as well, which is supported by Yin (2007). Choosing our methodology approach using both interviews and observations we can capture more in depth insights and understanding of how Vattenfall handles knowledge management while working in a distributed manner, which corresponds to our research question.

4. Results
During our field study ten individuals were interviewed who had different roles and different responsibilities, ranging from head of the department to team members. In the following section we will present 14 themes that are a part of, affected by or attitudes towards knowledge management with both interviews and observations as the source of our data.

4.1 Knowledge
What emerged through data analysis was that the perception of knowledge differs between individuals and has no connection when comparing roles. No respondent had the same definition of knowledge as another. One respondent sheds light on the discourse of knowledge by stating: “Knowledge is one of few things that you can share with others but still keep” (MM). Others stated that knowledge was about seeing patterns and learning fast to take action in different contexts. There was a difference in perceiving knowledge as documented knowledge and tacit knowledge residing in individuals.

4.2 Managing, Sharing, Transferring and Documenting
When asked about knowledge management the majority of the respondents were of different opinions but some of them had a similar interpretation. Others did not quite answer how they viewed knowledge management and started describing other subjects. Moving on to the transfer and sharing of knowledge our respondents had similar points of view where most agreed that knowledge transfer and knowledge sharing are based on the differences in how the recipient learns most efficiently. They stated that whether someone can absorb the knowledge that is being shared or transferred are dependent on both how it is broadcasted and its contents. There were also views that stated that timing was important for successful knowledge transfer and knowledge sharing. The transfer or sharing of knowledge was done via either using IT tools, documentation or physically face-to-face and this point of view were affected by the recipients cultural background. One of our respondents (EL) mentioned that documentation could be improved since there were a lot of room for error when documenting a project. One example of this was documenting cost for projects which was to be done in several places in the project documentation. Human errors could occur when editing cost,
making the actual or most current cost for the project a subject for confusion to the readers of the project documentation. Overall this respondent thought that there were too much documentation and places to change if something changed within a project.

4.3 Trust, Communication and Networking
All respondents claimed in one way or another that trust is an important factor for knowledge transfer and knowledge sharing. How to trust information provided to the respondents was mostly based on their gut feeling and their previous knowledge of the source of the information. One respondent (UM) pointed out the importance of time significance and the constant need for updated information. “The key is to look at when the information was produced. It doesn't matter if it is on the intranet or in another place. If the information is older than six months I am always hesitant because it is moving fast.” (UM). In order to transfer or share knowledge or information different communication channels were used, this was depending on what site the member was located at. The most common ways of communicating was via e-mails and meetings. Depending on what was to be communicated and to whom different paths were chosen e.g. when performing one-to-one communication and in this case e-mails or phone calls were used. While one-to-many communication was performed through meetings, online communities or blogs. Our respondents heavily stressed the importance of networking socially with co-workers to be able to work effectively at Vattenfall. As two of our respondents (EL) stated that networking is both a social activity on a personal level and a professional benefit for knowing who to turn to if work related issues arise or a project needs passing through a toll gate. Networking is also perceived to increase group trust and commitment towards each other which was assumed to facilitate knowledge sharing.

4.4 Strategies, Hierarchies and Reluctance of Sharing
Vattenfalls strategies, organisational goals and performance measures affected different roles in different ways. One ought to mention that there were even differences between individuals with the same roles as to what degree these factors affected them in their work. However, all respondents identified clear hierarchies and chains of command but degrees of freedom in their work were dependent on nationalities of superiors. According to respondents from one site, trust and hierarchies affected sharing behaviours.

“I think some of us tend to interpret the slogan that is relevant to keep the knowledge under or on their own desk. And so the, not everybody like to share knowledge, not all of us is team players, of course if I know the things then I will be asked and I would stay relevant, otherwise everybody can complete the tasks and that is understandable that they think in that way, especially if we think about the period and tendencies we see at Vattenfall when sharing of knowledge is a question of trust and a question of first confidence and those of us that are missing this.” (EL)
There were different theories about why an individual possessed a reluctance of sharing knowledge amongst our respondents. Some associated hoarding of knowledge with the fear of losing one’s job and others saw hoarding as a possibility to climb the company ladder. Knowledge was seen as an instrument for power that could be used to advance within the company.

4.5 Lack of Time and Cost Savings
A general lack of time to perform knowledge sharing activities was seen as a main contributing factor to not share knowledge. As our respondents mentioned they have high pressure to perform their tasks and they have to do it well and fast. Since their customers have become more demanding and require special solutions the pressure rises which leaves little time left for sharing activities. One of our respondents stated: “I would like to have more time to sit down and do the documentation. It facilitates... You do not have to invent the wheel one more time if the documentation is good. [...] This is always down prioritised and the last thing to do, sadly.” (EL). Lack of time was also related to cost saving strategies which decreased time to perform their assigned tasks let alone have time to document or share knowledge. Close to all of our respondents mentioned cost savings as a major problem for knowledge sharing activities.

4.6 Culture
Some of our respondents mentioned that Vattenfall is a multinational organisation with branches in different countries where the Swedish part of Vattenfall acquired and joined forces with companies in other countries. One mentioned (MM) that with the acquisition of for example German plants and firms an increase of personnel took place. With that increase the entire staff now had more diverse backgrounds and cultural beliefs, both national and organisational. Differences between countries in national culture were identified by most of our respondents and was said to affect how people perceive and interpret different matters. There were also thoughts on how tasks were performed and tackled by the different nationalities.

“You’ve got a ... You can talk about a Swedish team and a German team, there is a visible difference. Where the swedes might take a little more responsibility and perform tasks without asking and take more responsibility. And in Germany people don’t do anything before they are asked to. But there are some exceptions.” (EL)

Respondent (EL) explains the perceived difference as an organisational contrast between sites. This was also said to affect cooperation within projects or teams. The task for Vattenfall when acquiring new firms was to combine them with the existing cultures, both national and organisational. According to some of our respondents this can bring hardship to the organisation. Furthermore, when comparing statements from respondents a general statement was that there are differences in culture between Sweden and Germany.
“Of course I would like to encourage my colleagues to be open and honest, to be, like to share, to also get the good feeling if we have a success together. And I believe due to the success to... I am a team player from my childhood and I know that to win a match with a team it’s more satisfying than to have an individual success but not all of us have this experience and this background.” (EL)

As the quote above states the respondent wants all colleagues to be a team and work together against a common goal. Most of the respondents experienced a cultural difference in more of a negative manner which is visible in many situations in distributed teams.

5. Analysis
To specify the information from our results we have used the aforementioned framework by Argote and Ingram (2000) consisting of members, tools and tasks. The framework helped us to get a better view of the results and a greater depth of our analysis. We have implemented the framework as a filter of our 14 clustered themes and will explain the essence further below.

5.1 Members relationships
Members are as mentioned earlier human individuals that reside in the organisation. Therefore, member relationships are all the relationships that involve human interactions with other repositories.

Since our respondents showed that networking had an effect on how well they can perform their work and how well they interact with others we can see that the member-member relationship at Vattenfall is of great importance. When a new member enters the organisation it can be harder to navigate without a network. This is also stated by Argote & Ingram (2000) that member-member relationships both carry knowledge but also integrates members in an organisation. Another factor for member-member relationships is trust which has an impact for the employees. Trusting ones co-workers is also something that affects networking activities and how members interact with other members, which is why we identified this as a member relationship. If trust is not shared among co-workers a reluctance to sharing might occur which we can see in our results. Since sharing knowledge is a factor that is important for expanding networks and gaining trust this theme is associated with member relationships. Although, reluctance of sharing can also be part of the member-tools relationships where members choose not to share information or knowledge through tools. This can be seen as hoarding of knowledge/information. Reluctance to sharing or hoarding in turn also affects the cooperation between members. If effective cooperation is not achieved other aspects might be hard to reach, e.g. networking or trust, which is why this is within the member-member relationship. In total our result themes that were created from our codes, network, trust, reluctance to sharing and cooperation are identified as being parts of Argote & Ingrams (2000) framework for member-member networks. Furthermore these relationships are carriers of knowledge and they are indeed practices within our studied organisation.
5.2 Tools relationships
Tools are the software and hardware that are available to the organisation’s members, it can be seen as all the technology used by other repositories.

Within the organisation different levels of documentation have been mentioned by our respondents. Documentation are used in three ways, first the decision of what is important to document. Second, access of the documented information and third the value of the documentation. One factor that affects this documentation relationship is what tools the respondent has available. This member-tool relationship is one of the main reasons of knowledge sharing/knowledge transfer according to Argote & Ingram (2000) which is why we selected this attribute. The respondents explained the use of communication tools as dependent on the context of the information they were about to share. The usage of these tools will be viewed as a member-tool situation by Argote & Ingrams (2000) framework. However, the communication tools, such as email, wikis, instant messaging, in itself will be seen as a tool-tool relationship. The organisation’s total toolbox is the technological component that is handled by Vattenfalls IT department and the software that Argote & Ingram (2000) include in their framework. These tools are what makes all digital interactions available and is thereby of paramount importance within the framework.

5.3 Tasks relationships
Tasks are as earlier mentioned goals, strategies and intentions of the organisation. Tasks relationships are therefore interactions between tasks and the other repositories.

Our respondents identified strategies as affecting their work to less or more extent. Since members-task relationships also are repositories of knowledge this is important to point out. Tasks have the purpose of assigning members to tools in order to perform certain tasks, and therefore strategies and goal can be viewed as being at a higher abstraction level for tasks. These strategies were set by management and the board at the organisation and they are then, as our respondents stated, translated into operational goals. This is a good example of how member-task relationships work where a member gets a set of goals from management and are expected to live up to those goals. Due to the nature of the strategies formed by top-management our respondents experienced a general lack of time to perform other activities than their main tasks that were stated in their role descriptions. According to Argote & Ingram (2000) tasks control the way in which a member can perform their work tasks and this is why we have chosen to assign our theme lack of time to the member-task relationship. Also when strategies/goals/tasks require the same amount of work tasks to be done but by less people this affects the members in this relationship. Since our respondents identified cost savings as a reason for them to not be able to document or share as much as they would like to, this comes in from a strategy perspective. We assign this theme to the member-task relationship because the members experience cost savings as a negative force on their ability to share and it also creates a general lack of time to share knowledge. A rigid or more flat hierarchy within an organisation does also affect how tasks are formed and assigned. Since task-task relationships are a set of routines or tasks that the organisation performs, hierarchy affect this relationship as well. Furthermore hierarchies in nature affect members in different ways by either being more controlling or less controlling over what tasks are performed by
which members and with what tools. This is why the hierarchy theme can be said to be included in the member-task-tool relationship in Argote & Ingrams (2000) framework.

5.4 Others
Themes that we found during our data analysis that does not entirely fit in Argote and Ingrams (2000) framework will be stated in this following section. The themes can have the same nature as aforementioned themes but analysed from another angle.

Our respondents mentioned that culture affect how and why members share or do not share information or how they work or handle routines. This culture viewpoint is not pinpointed by Argote and Ingram (2000). The differences within Vattenfall in national culture come from, as stated above, the acquisition of companies in other countries. National culture comes with a particular set of norms and rules to follow. Organisational culture differences originate from the same aforementioned merging of different companies.

This affects a culture-member relationship we have identified in both a national and an organisational way. In the same spirit communication was identified as being somewhat different depending on which country or previous company a co-worker was from. Especially how knowledge or information was communicated differed depending on where a respondent was from.

Another aspect or theme that was depending on nationality or previous organisational culture in how to manage employees and hierarchies was perceived to be different. Since more German leader styles, in general, had a more strict or structured hierarchy managers tended to have more of a mid-or-micro level management whereas Swedish leader styles had looser reins and higher beliefs that tasks would be completed without micro-management. This is an aspect that can be described as a culture-member relationship since this stems from culture in how to manage staff and how the members respond to management styles. Similar differences can be seen in how processes and strategies were viewed by different respondents and perceptions of how processes and strategies were followed. According to almost all respondents there was a difference between Swedish and German employees when it comes to following processes. The Germans almost always followed the processes where the swedes saw the processes more as guidelines. This is assigned to a culture-task and a culture-member relationship since the ways in which people chose to operate is associated with culture. This way of viewing hierarchy as a component of culture is done with the previous statement that hierarchy is associated with members-tasks relationships. The addition of hierarchy to this other relationship, culture-member, is due to the difference in how different countries chose to work influenced by their previous organisational culture and their national culture. This is done since our respondents identified that there were differences in this area depending on country. For knowledge management this has implications in being a hampering factor for both sharing and transferring knowledge (Riege, 2005).

When working distributed within the studied teams networking is made more difficult due to distances and this is associated with the organisational culture that have sprung from the acquisition of companies in other countries. This is seen by us as a culture-member relationship but also as a culture-task relationship. Since networking and how the organisation is structured is based on organisational decisions and merger of several
companies this is affected by organisational culture. Also two aforementioned themes were trust and reluctance of sharing. The first of these is affected by mostly organisational culture from previous companies and hierarchy differs in Germany compared to Sweden. Then this can be seen as a culture-member relationship in a way that depending on both individual but also location of his/her office he/she might trust or not trust their co-workers information that is distributed. In another way this is a component that exists within a culture-task relationship in a way that organisational intentions, tasks and purposes stem from different companies which could indicate a hindrance to trusting information. These two last relationships are applicable to our theme reluctance of sharing. Due to cultural differences described above an individual might choose not to share because of structures or trust in colleagues or fear of losing their job.

6. Discussion
In the following section our results and analysis of the results will be discussed in relation to previous research and also in relation to the framework by Argote and Ingram (2000). Further the previous section 5.4 will be more thoroughly discussed in relation to research and how it affects knowledge management and knowledge sharing practices.

6.1 Addition to Framework
Rubstein-Montano, Liebowitz, Buchwalter, McCaw, Newman & Rebeck (2001) performed a literature study to combine previous frameworks within the knowledge management field to gain what the main criteria of a framework ought to contain. One of their findings was that cultural aspects were not taken into consideration and thereby the frameworks within knowledge management neglected the culture factor. Culture is not included in the framework used in our study (Argote & Ingram, 2000) neither in all the studied frameworks from Rubstein-Montano et al. (2001). Ismail Al-Alawi et al. (2007) state that further research regarding national culture in association with knowledge management is necessary, accompanied with organisational culture. Consequences for not considering culture are the loss of a dimension that management should consider in order to gain greater insight and understanding for knowledge management. Furthermore, the knowledge management research field need to fill this cultural gap. And that is why we have enhanced Argote and Ingrams (2000) framework with another dimension to capture the cultural aspects that according to this study have an effect on knowledge management. The framework is to be seen as a tool for researchers or managers to analyse an organisation and find what aspects of knowledge management are present.

To generate a better understanding of our extended framework we have created a visual table that consists of 16 fields according to the repositories that Argote and Ingram (2000) discloses: members, tools and tasks and also our contribution culture. The table reads from the top to the bottom and the greyed areas are relationships that is not covered by either Argote and Ingram (2000) or our enhanced framework.
In our study the framework would look like in figure 2 where the clustered themes have been assigned to their respective relationship towards the repository, which is more thoroughly explained in our analysis. However, this is not to be seen as a finished piece of work since the framework with our addition has not been tested by other researchers.

### 6.1 Members

Since Argote and Ingram (2000) state that members are the social network of an organisation our first theme here, network, is in line with Argote and Ingram’s (2000) statements. Networking was an important knowledge repository for our studied organisation and contributed to meaningful interactions. Having good social interactions and cooperation between employees facilitate knowledge transfer and knowledge sharing, and by extension knowledge management (Mårtensson, 2000; Argote et al., 2000; Riege, 2005; Ismail Al-Alawi et al., 2007). Research (Renzl, 2008; Swift & Hwang, 2013) tell us that trust between individuals is also an important factor for knowledge management, knowledge transfer and knowledge sharing. Since trust is a member-member factor in the framework and research tell us that there are different reasons for sharing or using intrapersonal knowledge this can be seen embedded in culture as well. If an individual do not trust the sharer of knowledge he or she will most likely not use the knowledge shared. This gives us an implication for Vattenfall where both affective and cognitive trust needs to be established to greater extent than today. Although our analysis states that there is trust between colleagues it can still be improved. Reluctance of sharing stems from a member-member point of view. Reluctance to
sharing due to fear of losing one’s job or seen as a power factor is cited in Riege (2005) as a barrier for successful knowledge sharing or knowledge management. Also where cooperation was a part of knowledge sharing practices in literature this was not apparent to be working in our studied teams due to a few reasons. Riege (2005) also states that cooperation within an organisation is important in order to bridge knowledge sharing/knowledge transfer barriers, which tell us that better cooperation could lead to better knowledge sharing in this case.

6.2 Tools
The member-tool part of the framework described many ways of documenting knowledge that were different for different people and locations. Several ways of documenting and sharing documented knowledge from lessons learned or project success were done by our respondents to different degree. This is something Alavi and Leidner (2001) brings up as carriers of knowledge but as Riege (2005) states it need to be done in a good manner in order to have a positive effect on knowledge sharing. Where employees chose not to document one aspect or the documentation process was hard or complicated our respondents thought that there was much room for error which indicates that, in line with research (Alavi & Leidner, 2001; Riege, 2005), documentation of knowledge needed to be improved by making more quality oriented documented knowledge instead of focusing on quantity. Focusing on getting the right information to the right recipient at the right time is essential. Furthermore, communication in our member-tool relationship for the framework positions itself within a knowledge carrier position where the sharing and transfer of knowledge are done via different channels. Having a variety of communication channels for sharing knowledge is part of the foundations for many knowledge sharing practises according to Riege (2005). A variety of communication channels existed in our case and is necessary for sharing but they were used differently depending on individuals. Since the relationship between members and tools in our case were linked to individual choice this can be said to be a positive aspect in our studied organisation. To have many different communication channels allow members to share knowledge in which way they like. All members have their own way of absorbing knowledge which is why several channels are beneficial. Having the right technology at hand for the members is thereby advantageous and supported in research (Alavi & Leidner, 2001; Riege, 2005).

6.3 Tasks
Our member-task-tool relationship part of the framework contained for example strategies which some of our respondents found to be directly affecting them in their work while others did not experience strategies affecting them directly. Riege (2005) states that “Integration of knowledge management strategy and sharing initiatives into the company’s goals and strategic approach is missing or unclear.” (p. 25) is one of the barriers to knowledge sharing. This, however, was not something that was found among our respondents while they stated that some strategies or goals affected them only a few mentioned knowledge management or sharing in association with strategies. They rather mentioned knowledge management/knowledge transfer/knowledge sharing as initiatives or projects. Although, if we look to our framework by Argote and Ingram (2000) it was stated that strategies are repositories for knowledge and in that sense Vattenfall should harness the possibilities that
these repositories can yield. Apart from strategies the organisation is built upon a hierarchical structure. This on its own is something Riege (2005) identifies as a possible barrier to sharing knowledge, depending on how rigid or flat that structure is. In our analysis different hierarchical levels work and share knowledge in different ways, higher levels thought that knowledge sharing was more frequent at lower levels than at their own level. This creates a gap between hierarchical levels when it comes to sharing of knowledge.

The lack of time to share knowledge is also identified in research as an issue, barrier or problem for effective knowledge management/knowledge sharing/knowledge transfer (e.g. Riege, 2005; Alavi & Leidner, 2001; Mårtensson, 2000). Since this was pointed out to stem from strategies, which lies within the member-task relationship, a lack of time was also assigned to this kind of relationship. Another aspect that are affected by strategies and affiliated with lack of time is cost savings. According to our analysis cost savings was mentioned in a negative sense and often in association with a general lack of time. This was positioned in Argote and Ingrams (2000) framework as a member-task relationship due to the fact that strategies were the main contributor to cost savings.

Cost savings are seen as a barrier to effective knowledge management/knowledge sharing and can damage knowledge bearing relationships between members (Riege, 2005). In order to reach an improved knowledge management Vattenfall need to review their strategies so that they do not decrease knowledge sharing, by for example changing strategies affecting cost savings or lack of time to share.

6.4 Culture
In the light of our analysis we used a culture viewpoint for other themes found in our data since our respondents pointed out that different cultures was an issue. Culture was often described as a contributor in how members chose to communicate in order to both contact co-workers but also when sharing information or knowledge. Different members from previous firms, due to the merger aforementioned in the analysis, had different default channels in which they communicated. Since successful communication is identified as part of the foundation for effective knowledge sharing (e.g. Dodgson, 1993; Davenport et al., 1998; Ismail Al-Alawi, 2005) Vattenfall should account for the differences in choice of communication channel depending on content and intentions for what is being communicated, in order to produce more effective knowledge sharing.

In our analysis we saw that hierarchies provide more control or less control over the members a manager handles. This was depending on leader styles and nationality of the manager, with some exceptions. More rigid hierarchical structures and micro-management hampers natural knowledge management and knowledge sharing, according to Riege (2005). The general presumption was that German leader styles were more rigid and focused on processes and structure compared to Swedish leader styles. In order for Vattenfall to achieve more effective knowledge manage mentor knowledge sharing within their teams they ought to consider these differences and facilitate sharing of knowledge appropriately. Riege (2005) mentions that too rigid hierarchies can impede cooperation and make knowledge sharing practices more viscous. Since hierarchies and leader styles accompanied by tasks/strategies set the foundation for how members work it also affects how employees follow processes and procedures. The following of procedures and processes was identified in our analysis as parts
of a culture-member and a culture-task relationship. The implications of culture on this factor come from how individuals chose to operate within an organisation and how local cultures can affect tasks. Having different socio-cultural distances in a distributed organisation can cause issues related to collaboration and teamwork as well as sharing knowledge (Ågerfalk et al., 2005).

Riege (2005) also points out that lacking social networks can be seen as a barrier to knowledge sharing. Since our analysis concluded that networking between countries was made harder by the distances between team members. Where distances can be of a cultural nature this was identified as being a part of culture-member relationship in the analysis. The implication of this relationship for the network theme is that the differences in culture make it slightly harder to create social networks across borders. This is why we suggest that Vattenfall invest time and effort in to decreasing cultural barriers by having more physical meetings where organisation members can interact socially.

Trust and knowledge sharing and also using shared knowledge goes hand in hand (Swift & Hwang, 2013). As Swift and Hwang (2013) states can trust be of both a cognitive and affective nature which means that trust can be improved by getting to know people around you at within the organisation. This can be linked to what was stated above for networking. Also as Riege (2005) states that lack of trust that other members might misuse information or credibility of the source are barriers to knowledge management. According to our analysis trusting information distributed was something that differed between individuals. This was also ascribed to culture when some co-workers did not respond to emails that came from individuals that did not have a manager title as the sender of the email. Trust is something that is built up by individuals over time and can be improved, Vattenfall’s case, by performing networking activities within the organisation.

Reluctance of sharing stems from both a member-member viewpoint but also from a culture-member relationship. In Argote and Ingrams (2000) framework this theme can fit in, as mentioned above, two separate relationships due to reasons behind the reluctance of sharing. If the reluctance of sharing is due to lacking trust in other members then it becomes a member-member relationship, however, if it comes from fear of losing one’s job then it can be said to be in a culture-member relationship. In other words, fear of losing one’s job can cause knowledge hoarding which shows itself with a reluctance of sharing knowledge which is embedded within an individual. Embedded knowledge can both be hard to share but also hard to document (e.g. Holste & Fields, 2010) and in our study respondents mentioned that some might not share knowledge due to the fact that they thought of knowledge as power in order to climb the hierarchical ladder. This is why we view this as a cultural relationship related to organisational culture. For Vattenfall to tackle this challenge they can try to enforce the organisational culture even more as one unit despite being a distributed organisation.

7. Conclusion and future research
In today’s society knowledge has become one of the most important assets for companies to compete. Knowledge management in practice is a way of sustaining competitive advantage by harnessing the knowledge repositories within an organisation. Due to being highly popular in practice knowledge management research has followed and is now an extensive research field. Through our advancement in knowledge management research our scope narrowed and
we chose to perform a case study. Distributed organisations nowadays are more and more common on the global market. While much have been written about knowledge management in practice little attention have been paid to qualitative approaches concerning knowledge management studies along with distributed multinational project teams.

The purpose of this study was to create deeper insights and understanding of how a multinational organisation handles knowledge management while working in a distributed manner. Along with this purpose the following research question was stated: *How are knowledge management and sharing practices handled by distributed work arrangements at multinational organisation?*

Based on our case study Vattenfall’s practices both makes knowledge sharing possible but still have aspects that hampers opportunities for sharing. Since our study shows that several relationships, in accordance to Argote and Ingrams (2000) framework, have both negative and positive sides. Member relationships contain knowledge that is kept within and between individuals. Tasks relationships are the guiding strategies and rules, and tools are the technological aspects that members use. We can then conclude that Vattenfall support sharing practices in some ways but we can still see barriers within other areas affecting knowledge management. However, another important relationship between members, tasks and tools was also present at our studied organisation and this relationship was culture. In our case study culture was a barrier and was expressed in different ways. Culture was seen to be affecting how individuals share knowledge and the choices made to what knowledge was to be shared. Another aspect of culture that needs to be handled is the way different leader styles affect members within the organisation. Our findings show that a multinational distributed work arrangement contributes to cultural differences within knowledge sharing practices. This is something that is discussed in section 6 and visualised through figure 2.

Through our study we would like to present the three most important practical changes a manager can use within a similar case. First, a common phenomenon today is strategic cutbacks to create a more profitable organisation. This creates a heavier burden for remaining employees which in turn cause lack of time. A general lack of time also hampers the possibilities to share knowledge. Cutbacks versus efficiency in the sense of sharing knowledge become an important consideration. Second, as mentioned by all of our respondents networking is a crucial communication instrument. Organisational culture affects the employees’ opportunities to create their own social networks. If the act of networking is not accepted within an organisation, little or no knowledge sharing will exist. Management therefore have to create and encourage networking opportunities in order for stronger bonds between employees to occur. Third, if an employee does not trust information or another colleague the knowledge sharing will be severely hampered. This can also cause reluctance of sharing amongst the employees which in turn reduces efficiency. These three important changes will help a manager create a better knowledge sharing culture within the organisation.

Our study is due to its volume not generalizable to a larger population and case studies as a method brings with it problems to generalise results from only one case. For further research our addition to the framework needs to be applied in more cases or even in a quantitative study. However, culture can be hard to identify with a quantitative study which
is why an ethnographic study might be better suited for analysing cultural effects. Also further research needs to examine how, why and to what extent culture affects knowledge management and knowledge sharing practices within distributed multinational organisations.

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Appendix 1.

Standard questions

- What is your name?
- How old are you?
- What is your title?
- For how long have you been working at Vattenfall?
- Could you describe your main tasks?

Introductory Questions

- What is knowledge to you?
- What is Knowledge Management to you?
- In your opinion, what are the most problematic aspects of managing knowledge?
- How would you like to solve that issue?
- Do you feel that your knowledge is valued in your work?
- Do you feel that your knowledge is utilized by or within the organisation?

Knowledge Transfer

- Do you feel that you know who to turn to if you have a work related question or problem?
  - If no: Why do you feel that way?
  - If Yes, How can you establish which of your colleagues to turn to?
- How do you determine how to trust information or knowledge that you receive from a colleague?
- How can you assess reliability of information?
- Do you perceive that you have knowledge about what your co-workers do during the work days/weeks?
- If so, how have you gotten that knowledge/information?
- How do you perceive knowledge transfer outside of your team?
- In what ways can you use or share knowledge outside of your team, if you see that it is required or beneficial?

Tools

- In what way do you communicate within FIBP?
- Do you feel that there is documentation or information available to you, that you can use in your daily work?
- How often do you use that information that is available?
  - Do you perceive that information to be useful?
In what ways could it change?

Members

- How would you describe the cooperation within your team?
  - Are there aspects that you would like to change?
  - How would the optimal cooperation within the organisation play out, in your opinion?
  - Do you have any insight in to the work on the other sites of your team?
  - How committed are you to the work that is performed on the other locations within your team?
- Are there any language barriers within your team?
  - Is there something that you would like to change in terms of language, within the team?
  - Do you feel that the language use challenge you in your work?

Tasks

- Do Vattenfalls goals and organisational strategies affect your daily work?
  - If yes, how do they affect you?
  - If no, why?
- Would you like to change any of these?
- Are there any differences in work practices and approaches between teams?

Miscellaneous

- What would the optimal/dream solution to knowledge management be, in your opinion?
- What do you do in order to control that you have made correct decisions and tasks?
- What are your personal/or work-related goals?
- What are your preferred ways of communication?

Would it be okay if we contact you later if there are any concerns about your answers, or to get clarification on any issue?