Innovations, with inspirations from a socio-technical perspective

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“A research of AB Electrolux intranet ‘E-gate’ and their product development process”

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Pleasant reading!

Mikael Sonesson
Abstract
AB Electrolux is a company that focuses on innovative products and collaboration amongst others. Today, they are using their intranet “E-gate” to enhance collaboration. AB Electrolux has recently introduced new Web 2.0 social media technology on E-gate. In contemporary business, it seems like social media and innovations are hot topics; but it is not easy, to implement social media, create innovations, and also make use of it in an organisation. In a majority of organisations are these matters often overrepresented. In organisation different policies, rules, guidelines and employees are involved during changes, and this is aiding organisations to establish how social media features can enhance and promote innovation.

Nowadays, innovation is significant to organisations, especially when it comes to gain advantages toward competitors or when trying to advance in the marketplace. In this thesis the collected information is objectively applied. This, in order to gain qualitative knowledge about subjects of interest such as; cultural issues, knowledge management and the socio-technical perspective – because these areas could be considered to have a huge effect and impact on innovation. Further it could have an effect on how innovation emerges in organisations. This is of importance especially in areas such as knowledge sharing and knowledge transfer.

The results are showing: Organisational culture and knowledge management plays a crucial and important part of innovation. These areas must be considered if organisations are implementing or using new technology. It is also to be recommended when organisations are trying to enhance the pace of innovations. In this thesis I have also constructed a model that illustrates how an organisation could create an innovative atmosphere, along with a socio-technical perspective.

Keywords:
Knowledge management, Web 2.0, Enterprise 2.0, Intranet, Knowledge sharing Knowledge transfer, Innovation, Organisational culture, Social media, Socio-technical, Leadership, Product development process
Executive Summary

Background

Davila, Epstein and Shelton (2007) argue that in regard of long-term business innovation and product development process can secure organisational future success, and this is undisputed. In order to further shed some light into the above, my aim is to holistically explore the creation of innovative thinking. This through concepts of knowledge management and Web 2.0 technologies, accompanied with a socio-technical perspective, (based on the work of the Tavistock Institute of Human Relations) at AB Electrolux that utilizes their intranet, as a social media. This thesis is a part of a Master program in Linnaeus University at Växjö, Sweden. My intentions are further, to look at the product development in AB Electrolux head office at Stockholm, where the intranet E-gate is used. Recently AB Electrolux has made some key changes, and is now in the process of exploring the benefits, from using Web 2.0 technologies– this especially due to that E-gate in some way is developed as a social media.

Problem definition

In an enterprise 2.0 with emergent social software platforms (ESSP), barriers have been created. Like employees reluctance of embracing freely flowing and growing of information, followed by an organisational effort, trying to create transparency and openness (McAfee, 2009). Integrating Web 2.0 technologies could be difficult, when trying to fit all pieces in the puzzle. In areas previous mentioned, up to date there is a lack of research. Further, how could Enterprise 2.0 initiatives interact with organisations and bring successes to the surface?

Purpose

Through empirical studies and literature review, in aspects of a socio-technical perspective – the purposes of this master thesis are to find out how an organisation’s intranet, aided by Web 2.0 social media technologies could promote and improve innovation, through knowledge transfer and knowledge sharing.

Result

This thesis points out vital issues during innovation that could be used and also in other important areas – when organisations are considering technological and human aspects. Between these two aspects, there should also be some sort of interplay. To be able to create new innovations, then this interplay must first be recognized by the organisation. Further, not all innovations are useful innovations – organisations must think of economical issues, which could prevent an innovation to become successful. In regard of knowledge, one needs to know that all knowledge is not easy to share. Within social areas are cultural issues always important, and there is also a need to combine culture and people into technology, to gain some advantage. This to further improve innovations and the use of technology – therefore, job roles must be considered when implementing or when technology is used. In such a case the relationships amongst workers are also vital and should be taken into consideration. In the result I am also showing a model, this model illustrates how organisations can create an innovative atmosphere. I further explain how culture and Web 2.0 social media technology could improve knowledge sharing and knowledge transfer, promoting and increasing innovation.
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1 Introduction

Web 2.0 is an important topic nowadays in Information Systems (Lytras, Damiani and Ordóñez de Pablos 2009). Web 2.0 is about second-generation Internet-based-services – these can be connected, referred, related, understood or proposed as social networking sites. To keep up with competitors and enhance knowledge sharing, leading to new innovative ideas, Web 2.0 technologies are a must. It also plays an important role in the evolution of organisational successes. Further, it is also related to communication tools like mashups or folksonomies. This stresses the significance of online collaboration and to share with other users (Lytras, Damiani and Ordóñez de Pablos, 2009). Web 2.0, which also mentioned by Matuszak (2007) who claims that organisations are becoming an Enterprise 2.0 when utilizing Web 2.0 technologies to enhance collaboration, sharing and organize information. This supports the necessity to become more efficient and to meet new demands, in order to deliver business benefits.

Cook (2008) argues that Web 2.0 technology has made it possible for organisations to find new ways of distributing services and products. Even today this topic is highly important, where significant information is missing and where organisations do not use the full potential of such techniques. In recent years the Web has become a two-directional resource, where social networking is expanding in business and includes new social media functionality. Thus, people can interact and share information and knowledge, revitalizing business and work environment (Stair and Reynolds, 2012). This is supported by Asblom (2012) who writes; today there are many organisations that strive to get an extended flexibility in their intranets.

According to OECD (2000) we live in a knowledge based economy. In this economy innovation has a central role and has lately been insufficiently understood. But at the macro-level much information during last year’s studies are pointing in the direction that “innovation is the dominant factor in national economic growth and international patterns of trade. At the micro-level – within firms – R&D is seen as enhancing a firm’s capacity to absorb and make use of new knowledge of all kinds, not just technological knowledge” OECD (2000, p.15). Further OECD (2000) mentions that when it comes to the ability to learn inside organisations are factors like: “Ease of communication, effective channels of information, skills transmission and the accumulation of knowledge, within organisations and among them, is [ict] highly important. In particular, management and an appropriate strategic outlook is [ict] key factors” (OECD, 2000, p.15). In regard of the topic, Riedl and Betz (2012, p.1) further claims: “The evolution of static intranets to dynamic web 2.0 based information systems are one way to provide space for the collaborative production of knowledge within an enterprise”

Today the uses of Web 2.0 technologies are more common in organisations, where technology enables people to connect and collaborate across borders. This makes problem-solving much easier. Organisations also have the potential to increase productivity and meet new demands more efficiently. In such cases, KM has been an important subject, often debated in science and often seen as an enabler of organisational success. KM is something that can be improved and also more efficient through the use of Web 2.0 technologies. Further, implications are that knowledge transfer and knowledge sharing are most likely to be such areas, which will be influenced by the use of Web 2.0 technologies in an Enterprise 2.0. Knowledge sharing is seen as one important aspect which will have a great impact on how organisations can meet new demands, in a globalised world.
Further, knowledge transfer is an area that has to be considered when using Web 2.0 technologies. Both these types of knowledge enhancement are tied to the users and their willingness to contribute to the organisational body of knowledge. In this case organisational culture is an important factor, which could enhance the engagement of users. It could enhance knowledge sharing, allowing users to embrace sharing through a knowledge management system (Matuszak, 2007). In this study I will first introduce a background, and later on I will write about the objectives of this study. Later follows a section about my methodological choices and decisions. Then comes the theoretical background, derived from literature; this part is followed by the socio-technical perspective and a chapter that is called innovation. When reading these two chapters along with the literature introduction; could readers go forth and hopefully better understand the content of the following parts. These chapters provide an understanding to, why and how this thesis is organized as it is. Further I believe that we are still in the infant stage of Web 2.0 social media technology. Through this study, I hope to share new knowledge, or enlighten organisations about the use of intranets which embrace a socio-technical perspective – achieving and enhancing innovation. I have further established a model to promote innovation which could help organisations – this model is illustrating how organisations could create an innovative atmosphere.

1.1 Problem Discussion

Regarding knowledge, Nonaka and Nishiguchi (2001) writes that the importance of knowledge has earlier been established, but there is still a significant part that needs to be discovered in this area. Therefore, it should be further examined and explored. So today knowledge creation in organisations could be seen as being in an infant stage.

According to AB Electrolux the PDP counts as one of the most significant processes when it comes to innovation. Thus, this research will focus on AB Electrolux head office in Stockholm which uses “E-gate” (AB Electrolux global intranet). Recently, E-gate went through some major changes. Thus AB Electrolux is now in the process of exploring the benefits, from using Web 2.0 technologies on their intranet. Web 2.0 technologies will profoundly impact on business and how communication, cooperation and collaboration will evolve in the future. Especially as E-gate will become more of a social media. In order to be able to grasp and comprehend the effects of such initiative, my decisions in how to go forth will be deeply rooted in understandings of people’s perceptions and boundaries. Furthermore, my belief is that a hermeneutic philosophy will be the most efficient way to understand AB Electrolux initiative when incorporating social media on their intranet. Or as stated by Asblom (2012): “Facilitate cooperation across unit boundaries, and develop tools for internal communication, from mass emails to communicative flows. At the same time we need to gather relevant information and files in one place”

These thoughts might also be applied when it comes to innovations. An innovation should be developed by a “knowledge-based” view focusing on interactive processes, where knowledge is created and exchanged inside and outside the organisations. If these are accompanied with a socio-technical perspective, appreciated by organisations, then an innovation could become more valuable. Further a socio-technical perspective could also help organisations to cope better with ordinary work. Or, implementation of new technology could be improved both at present and in the future, if an organisation tries to advance in a competitive market. A Web 2.0 technology, could be a wiki, blog, social networking sites, web applications or similar. But, the main issues are the users of Web 2.0 technologies, because users could contribute to the content, controlling it. Issues that
When using similar technology, there are also other important issues that one has to consider. One is the use of knowledge management and its supporting activities, which go hand in hand, with the usage of Web 2.0. Organisations tend to only look at the technological problems, and forget about the real issues often related to people. Cultural barriers related to people are very important issues, when organisations are trying to adapt to new applications. This also needs to be taken care of when organisations are using Web 2.0 technologies.

Edquist (2005) claims that, to increase growth and material welfare, technological change and other kinds of innovations must be seen as the most important sources of productivity today. This statement is universally accepted (Edquist, 2005). McAfee (2009) claims that Web 2.0 was created to explain technologies available on the internet and what impact they made. McAfee (2009) further states that he coined the expression Enterprise 2.0, to explain how these same technologies could be exploited – either on intranets or extranets, to express what kind of impact they would have on business.

Or as Davila, Epstein and Shelton (2007) proclaim; in regard of long-term business, innovation and product development process (PDP) could secure future success, and this is undisputed. It seems like that technology and innovation go hand in hand, and that product development is the most suitable place for changes according to Davila, Epstein and Shelton, to achieve better business in the long run. Other issues could be that organisations just do not know or understand Web 2.0, and how to benefit from it when they are doing business. In an Enterprise 2.0, emergent social software platforms (ESSP) could create barriers. Like the reluctance of some employees to use freely flowing and growing of information, which is followed by an organisational effort to create transparency and openness (McAfee, 2009). Enterprise 2.0 challenges are about biases, followed by individual choices and endowments. To improve Enterprise 2.0 and the use of ESSP, a larger number of peoples are a necessity. Also relevant are the choices made by individuals, which concerns what kind of technologies they should use in communication, collaboration and interaction. However, case studies show that there are a lot of different outcomes in a company (McAfee, 2009).

In a report about Securitas social networks, Gisela Lindstrand Senior Vice President of Securitas points out that there are a lot of activities which are constantly increasing, and that “we are working in a whole new way, of sharing knowledge internally.” Experienced difficulties are language barriers and further how knowledge is shared in organisations. In addition discussed, is that there is also a fear of losing control and that critical information is disseminated. Gisela concludes this, by saying: “It is difficult to calculate the business value but it has allowed us to work on a whole new way of sharing knowledge internally” (Lindström, 2012).

To implement sharing services might be an easy task, but to integrate Web 2.0 technologies could be difficult, when one is trying to fit all pieces in the puzzle. Our Web 2.0 world does create a huge number of indefinite possible integrations and services, which also could be added to the core in a business model, in an organisation (Stephen, 2009). “Despite the fact that social software is now commonly provided for intra-company usage, this usage is below expectations in many cases” (Riedl and Betz, 2012, p.1).

Up to date there is little research about the interplay between Enterprise 2.0 and its success rate on initiatives. This is not a single phenomenon; there is also little knowledge about the organisation of work – which manifests itself in structures of
organograms, standards within companies, and business process descriptions. This is followed by corporate culture, including norms and values, which are rooted in the organisation (Riedl and Betz, 2012).

I find these problems intriguing, but a simple solution might not be easy to find. An effort is to share a bit of knowledge and at the same time retain some. I hope that this paper will contribute to some new innovative ideas. Or maybe corporate business ideas would be enhanced. So my intentions are to find some answers, in how to improve organisational activities, increasing the pace of innovation, along with a socio-technical perspective. If organisations use a socio-technical perspective in areas having great impact on innovation, organisations could then most likely establish an innovative atmosphere. In order for this to happen, I believe that Web 2.0 social media technology will play an important role, where organisations needs to think interdisciplinary, embracing areas around knowledge management and culture.

1.2 Research Aims and Objectives

Creating innovation, taking care of knowledge and making use of it in all parts of an organisation is difficult and it requires some sort of knowledge management systems. In an Enterprise 2.0, Web 2.0 technologies is often used to transfer and share knowledge. But organisations do not use the technology to its full potential, because organisational focus is on the technology itself. Because of this, peoples who use these technologies are disregarded in many cases. To become an Enterprise 2.0 and reap the benefits from using Web 2.0 tools a number of issues must be taken into consideration. Not just the technological aspects, but also a socio-technical perspective ought to be the subject of interest in organisations, where the culture is supported. In such a case, organisation might in the future both sustain and enhance the use of Web 2.0 technologies.

Hence my aim of this study is to create a sustainable model – which could be used in a number of different organisations – in order to create innovation and support an innovative atmosphere. I will coordinate literature with my empirical findings and against areas that most likely will have an effect on how innovation is created.

Research Questions

• How could Web 2.0 social media technology, improve knowledge sharing and knowledge transfer, promoting and increasing the pace of innovation?
• What cultural aspects, could have an impact and support knowledge sharing, knowledge transfer in an intranet and enhance innovation?
• How could organisations create an innovative atmosphere?

Scope and Delimitation

Through empirical studies and literature reviews concerning aspects, in regard of the socio-technical perspective – the purpose of this master thesis is to find out how an organisational intranet, with aid of Web 2.0 social media technologies – could promote and enhance innovation, through knowledge transfer and knowledge sharing. Innovation has a strong connection to product development – because of this will my empirical studies be based on employees connected to this area. Web 2.0 is a wide concept and in this thesis the notion of Web 2.0 is only related to an organisational intranet, which is used as a social media. This is also just seen from a socio-technical perspective. Statements regarding intranets are that they could facilitate the creation of new innovations, by sharing knowledge at a low price. As Star and Reynolds (2012, p.203)
would put it: “An intranet is an inexpensive yet powerful alternative to other forms of internal communication”. If there is a capability to share knowledge in an organisation, then one should take advantage of this – in order to further enhance and support knowledge-creations. KM initiatives are today focusing on knowledge management, this in order to identify and share knowledge by using new ways, incorporating suppliers, customers and partners according to Mentzas et.al (2007 cited in Kirchner, Razmerita and Sudzina, 2009). One should also try to exploit a richer form of knowledge-assets to include blogs, wikis and social networks, by using Web 2.0 tools, focusing on the social collaborative dimensions on the web (Kirchner, Razmerita and Sudzina, 2009).

In the part concerning knowledge management, I will turn my focus on knowledge and how it should be shared and transfered through an intranet, acting as a social media.

Further implications, are to provide understandings of how cultural issues influence knowledge transfer and knowledge sharing, enabling innovation. My intentions in this research are also to supplement the current body of literature, in areas of innovation and its subsequent performance enhancer. I will also make an effort to construct a model based on interpretations of the results, which illustrates how an organisation could create an innovative atmosphere, in a combination with a socio-technical perspective.

In this master thesis, which is a part of a Master program in information systems, at Linnaeus University, Växjö, Sweden, my intentions are to look at the above mentioned areas and to holistically explore the creation of innovative thinking, through concepts such as knowledge management (KM), Web 2.0 technologies, accompanied with a socio-technical perspective (based on the work, of the Tavistock Institute of Human Relations). My intentions are to further evaluate a specific part, called product development, which is one of the building blocks of AB Electrolux entire product development process. My thesis also covers an evaluation of social media technology on their intranet. These technologies are used by the employees in product development at AB Electrolux, in order to become a better and stronger collaborative organisation.
1.3 Disposition

Chapter 2 – Methodology
*In this chapter I give information about my methodological choices and methods. I also present how this thesis has been developed.*

Chapter 3 – Literature
*In this part of my thesis the theoretical aspects are represented, which have been important in finding answers to my research questions, supporting my empirical studies.*

Chapter 4 – Empirical Study
*In this chapter I am presenting the material from my empirical studies.*

Chapter 5 – Analysis
*Analysis is a reflection and interpretation of the collected materials; my findings in the literature are represented and compared with the empirical material.*

Chapter 6 – Result
*In this part I present the results of this thesis.*

Chapter 7 – Discussion
*This is an end discussion about the result and implications for further researches in the future in regard of areas connected to this thesis.*
2 Methodology and Methods

In this chapter the methodological choices are presented. First a research philosophy is debated and later issues regarding methods are, discussed and answered for and why certain choices were made. Later, I write about my organisational choice and the respondents. Chapters ahead are about choices regarding interviews and where they took place. In the end of this chapter I argue about the importance of ethical considerations and finish this part with a general method discussion.

2.1 Research Philosophy

Hans-George Gadamer acknowledges Augustine’s work the universality-claim of hermeneutics as the origin – where Augustine establishes related connections among language, interpretation and that there is an existential level of self-understanding. Whereas Martin Heidegger is more interested in Thomas Aquinas work the notion of being (Ramberg and Gjesdal, 2005).

Those people, together with Paul Ricoeur are some of the most famous in the twenty century when it comes to contemporary hermeneutics. Each of them belongs to different strands of this philosophy. Despite this, the different strands are closely connected, according to Idhe (1998). My ideas when conducting this research is to apply the hermeneutic philosophy and using the strands of Gadamers work. Today the hermeneutic field is acknowledged as one of the major philosophies.

This philosophical standpoint is known to consider the interpretation of human understandings, extracting knowledge about organisations and their cultures. This could be suitable, when trying to catch a glimpse of people’s interpretations, according to Jacobsen (2002). Maybe this will give understandings, about people and their perceptions, when organisations are using new technologies, such as Web 2.0 tools in areas such as sharing and transferring of knowledge (Jacobsen, 2002).

According to Gadamer (1975 cited in Johans, 2010) hermeneutics is about understanding of text – where the text is about experiences we have acquired. During this, the practitioners must distance themselves from the text. So it becomes possible, to move towards a more subjective-, objective dialogical relation with the text. Or, as Ramberg and Gjesdal (2005) writes: “The term hermeneutics covers understandings and interpretation in areas such as linguistics and non-linguistic expressions”. This could bring clarity to one's understandings, eliminating assumptions and judgmental behaviors (Gadamer, 1975 cited in Johans, 2010).

In this research people’s thoughts and perceptions are vital aspects of the result. And my intentions are to further use the hermeneutics circle/spiral to gain understandings, and explore how knowledge could be shared and transferred in an Enterprise 2.0.

Hermeneutic Circle/Spiral

The hermeneutic spiral evolves from the dialectical process – where one goes from one part to another, constituting the wholeness of the hermeneutic spiral (Weinshammer, 1985 cited in Johans, 2010). The purpose of the hermeneutics could be understood in a crystallized form, namely the hermeneutic circle/spiral. In this circle one can find two very distinct circles, which have a relation. In the very first circle, which is temporal –there is a connection in understanding and pre-understanding. The second circle expands, followed by a contraction, which is related to a context of meaning, which also connects those both parts, to a whole: “Word to sentence, sentence to text and social action to social system. It is only when applied to relation between

This notion of the hermeneutic circle can be very functional. Because this notion will provide a method, allowing you as a researcher to identify different types of data available, as well as: Perception, information, ideas, impressions, and feelings in an interpretive way and within the context of even previous understanding (Hersch, 2003).

If we proceed, in this manner one needs to acknowledge that there are a large set of areas, which are unknown; those areas are inevitable, and is a part of an ongoing process. These areas are creating new exquisite opportunities of understandings, enabling interpretation of complex systems. These new ways of acting will most certainly redirect us in some new direction – but often we find us later to be back in the same issue, but, with new and different perspectives. “A succession of apparently better but never complete understandings of the phenomena in question can be expected in such an approach” (Hersch, 2003, pp.168-169).

Considering the recent part, one should most likely talk about the hermeneutic spiral, instead of the hermeneutic circle. Due to the circumstances that one will return to the same point, but with a different view, not like in a circle, but rather more like a spiral which “implies a progression in a particular direction” (Hersch, 2003, p.169).

Weinshammer (1985 cited in Johns, 2010) is claiming that both the physical universe and the universe of discourse are constantly expanding. Thus, the hermeneutic circle implies that truth can be recognized as a definite reconciliation of the whole, and parts of it probably could be conceived as a hermeneutic spiral, where the truth continues its expansion. This according to Weinshammer (1985 cited in Johns, 2010, p.40) means: “That is the whole truth never is but always to be achieved” Further in Johns book, one can also read about, some critique made by Weinshammer, in regard of Gadamer’s work.

The hermeneutic spiral is also mentioned by Grant Osborne in his book “the hermeneutic spiral” for a couple of reasons. First to take notice of is that it denotes a rising and constructive process, going from an earlier pre-understanding – in order to better enlighten the understandings, and later on return back to check and review the demand for changes or corrections of these preliminary understandings. “Second, this dialogue between pre-understanding and understanding merges into a further process of examining the parts or pieces of the puzzle that we handled initially and relating them to an understanding of the whole picture” (Osborne, 1991 cited in Thiselton, 2009, p.14). In an effort of understanding and interpret interviews the hermeneutic spiral will also be a tool for this research, to further gain valuable knowledge and solve the research questions.

2.2 Approach

In the initial stage of this research my intention is to investigate and further gain knowledge, about areas of interest and which are related to my research aims and objectives. The empirical material will later be collected from AB Electrolux, to widen my knowledge base. Knowledge in those areas will probably give insight in how to proceed in this research.

In regard of the method of logic, there are some alternatives. As Jacobsen (2002) writes; there is the deductive approach – in this case the researcher will collect empirical data and theoretical expectations will be used. Another approach is the inductive – where the researcher almost has no previous expectations, going from the collection of empirical data and then goes further using a theoretical study. In this case the most
suitable way of conducting a research will be neither a deductive nor an inductive approach; instead something in between will be preferred. With this in mind, I have selected the so called abductive approach, which better will suit this research – in this case, one goes back and forth between the collection of empirical material and literature; this kind of approach, certainly will be in line with the hermeneutic spiral, as I see it.

2.3 Data Collection

Initially email and telephone calls constituted my pre-understandings about AB Electrolux. Later, it led to decisions about the empirical study and the literature review. The empirical study will be constituted by qualitative interviews, and at AB Electrolux will interviews be conducted. Questions will be addressed to people, who have insight, and knowledge about the product development processes and who uses the intranet on a daily basis. As Jacobsen (2002, p.39) claims: “The qualitative method could as it has been said, be seen as a reaction on the natural science approach to affect a social phenomena”.

During the interviews which each of them took about one hour I always closed the interviews with the question: Do you have something more that you would like to add? I think that this will provide an opportunity for the respondents. This will also allow people to speak about something important, which earlier have been disregarded. During the research, I conducted five interviews. Maybe the respondents are too few? This in itself will not necessarily support a strong conclusion, making this study less generalizable.

Further, observations can be done in place, to gain information about different objectives, which have had a significant impact on Web 2.0 tools. Observations could give valuable knowledge about people, and also if they behave in a specific way when using Web 2.0 tools.

In the beginning of this research, I spent around three hours looking at AB Electrolux “social media” E-gate, observing blogs, layout etc. Beyond observations, could a qualitative approach, also give information which could provide deeper knowledge about a specific phenomenon, and give somewhat true understanding for a specific situation (Jacobsen, 2002).

In this research are semi structured interviews a prioritized form, when the empirical materials are collected. Notes were not taken during interviews. The conversations were recorded to further establish that the data collected are valid and correct. Because of that the interviews were held in a natural environment, the interviews will become more comfortable to the respondent. This causes a reduction of stress to informants involved. In the beginning, I also stressed on that if a question during the interviews were out of their range of knowledge, then we could disregard this question and move on to the next. I would like to think that this in one way or another could make the respondents’ to feel more secure and comfortable during my interviews.

In natural settings a researcher will collect data; this kind of work is closely connected to qualitative interviews (Creswell, 2009). Jacobsen (2002) also considers that, if an interview is held in an unnatural setting, then the answer will also be unnatural. My collection of data is later transformed into information – this, through transcribing the interviews. Then it is analyzed this in order provide some results. The interview questions followed an interview guide. But, since it was semi structured interviews with follow up questions, the elaboration of answers could not be excluded. And in this study some answers were further discussed.
When I was constructing the interview guide, I were using information from Creswell (2009), who states that when performing a qualitative interview one should not have more than two central core questions, and a maximum, of seven sub-questions. Further, Creswell (2009) writes that questions should start with either what or why.

To proceed with this research during data collection are documents also important. Other findings could also further reveal interesting information, which is substantial for this research results. It is also important, to inform the participant about the interview, before starting to ask any questions. One should also inform them about the availability to become anonymous and in such a case their names should not be written down and shown to public (Kvale, 2007). During interviews I informed the respondents about my intentions and about the possibility to become anonymous. I further asked about the ability of asking more questions, if something was unclear to me – the response was in this case positively. Further suggestions were given, containing information about that all respondents would be given the opportunity to read the study before it was published. So they could give their consent to the publication of this thesis. Further Jacobsen (2002) gives a suggestion that one should use general questions, during an interview. And that this will give the respondents the ability to answer questions with words of their own, according to his/her beliefs.

The qualitative methodological approach was first considered to be suitable, and later on during my interviews, it was also used. If, to be critical about using a qualitative research approach, then one has to reflect on – that we only can reach a small number of people. This makes it problematic, to claim that the research is generalizable; this is often a problem which occurs, when researchers are using a qualitative method (Jacobsen, 2002).

**Documentation and Respondents**

In regard of the collection of the empirical data and the selection of respondents; I initially used the so called snowball method. This method implies that a researcher starts without a fixed criterion; this will support flexibility in a study. In this research, I started with a phone call to Electrolux Laundry Systems Sweden AB, talking to a person I know could guide me further in my pursuit of other respondents. During this call, I presented myself and my work. This telephone-call gave me information about a new contact, knowledgeable in areas of my thesis. And from this point the snowball effect began to take its toll (Jacobsen, 2002).

During this work, and as Jacobsen (2002) considers when choosing respondents to an interview, one can use a combination of methods. So, after my initial snowball method I used such a combination, which consisted of emails and telephone calls. In the end, I had five skilled persons who most likely would possess knowledge I was looking for, enabling them to answer my questions (Jacobsen, 2002).

In the ongoing work, I also collected documentations about AB Electrolux; these were apprehended from their website, constituting the material knowledge base in this research. Also, other inspirational sources were used these are represented in the reference list. These were also a part of the seeds of this study, which made it possible to harvest an interpretive conclusion of this work.
2.4 Selecting the Organisation

In this case, knowledge previously apprehended from earlier studies at Electrolux Laundry Systems Sweden AB; together, with a comprehensive discussion with my tutor, led me forth in the selection of AB Electrolux. Because, if innovation could be seen as an area of expertise, AB Electrolux could be considered as a most suitable company – due to the fact that innovation is regarded as an aspect of most importance – and has been so for quite a long time. Recently this year, they implemented new social media features in their intranet. They have also made some major changes, which supports the overall functionality of their intranet.

Thus, AB Electrolux is an interesting organisation, arousing my curiosity. My intentions are to collect empirical material, through interviews with workers who have sufficient knowledge about Web 2.0 technologies. And who uses the intranet, in his/her everyday work.

Further initiatives have been taken to apprehend further knowledge, about AB Electrolux culture. Thus, this research has been extended to involve one more respondent working at Electrolux Laundry Systems Sweden AB in Ljungby.

2.5 Interpretation and Analysis

When data have been collected, the empirical material will be interpreted to information and then analyzed (Jacobsen, 2002). Early in this study I made a choice to follow Creswell’s suggestions when data is analyzed, as seen in figure 4.1. In this study, I first started to arrange all data, later on transcribing all the interviews exactly as they were recorded. Like Jacobsen wrote, information should be gained through a comprehensive reduction and systemization of the material collected and later transformed into manageable information (Jacobsen, 2002). I then read through the transcribed material and went on categorization it. Then I made up themes of these categories and completed it with some headlines, represented in the empirical section. Kvale (1997) proposes that when this is done analysis begins, where interpretation of the gathered information is performed.

Interpretation, in the field of hermeneutics, is supposed to give valid and common understanding of data. And as a researcher one has a perspective in the field of inquiry, where data later is seen from a lens belonging to the researcher performing the qualitative interviews. Creswell (2009) proposes how to perform an analysis in a qualitative study, and this by following a linear hierarchical approach, going from the bottom and up to the top. This is illustrated in the following figure:
According to Kvale (1997, p.134): “The ideal interview is interpreted widely over the course of the interview”. This statement was considered important during interviews. Kvale (1997) also mention a set of methods for analyzing interviews, which contains: concentrator, categorization, narrative interpretation, and ad-hoc methods. In this thesis when I was analyzing my interviews then I used an ad-hoc analysis, this in order to contract and catch the purpose of the thesis which enabled to present my information in a narrative way.

Like Kvale (1997) states, if there is a lack of spontaneously told stories then a narrative analyse could strive to create a coherent story, including reported events during interviews. Later empirical material will be interpreted and compared to the literature which has been collected. And after this I will then try to find some answers to my research questions.

### 2.6 Ethical Considerations

According to Kvale (1997) there are seven ethical questions, one has to consider during a research, and these are as follows:

1. The purpose of an interview should not only be applied to science it should also improve people’s situation that is subject of the investigation/questions.
2. People involved in interviews must give their approval to the interviews and one must guarantee their confidentiality. Further one must seek future consequences of the interviews and what this could lead to when it comes to people’s situation.
3. During the interview, one has to make sure that the respondent understands the consequences of the interview, regarding stress or similar aspects.
4. During printout the confidentiality must be confirmed and secured by the researcher.
5. In the analysis the researcher must have in mind that the result of the analysis will not be too critical and if the subject of the interview should have a second opinion about the outcome of the analysis.
6. The researcher must verify all possible knowledge in the report and make sure that it is verified as far as it could be.
7. During the report of the research confidentiality and consequences have to be regarded. Thus if the research is published, respondents and other parts mentioned must be considering.

Other issues important in the ethical side of this research, is that the purpose of the study has to be declared by the researcher to respondents accordingly (Sarantakos, 2005 cited in Creswell, 2009). Further, one should never put any of the participants at risk, respecting others opinions and their human rights.

One way in the proceedings of a research is to develop an informed consent form. This form is then presented to the participants, and which is signed before interviews can take place (Creswell, 2009). Into account one also has to consider the place visited, respecting all the rules and regulations.

When someone is doing a research, then they should also bear in mind that language sometimes could intimidate people. And because of this, one should choose such a language so that people will not be offended. And also think of, that a researcher’s role could have an impact on a research (Creswell, 2009).

**Informed Consent**

This is about that one should inform the participants. Tell them about the purpose of the research. Further, one should also inform them about eventual risks that might occur, and also about the benefits from participating in the research. But, this might not be as easy as it sounds. Maybe the informant is willing to participate, sharing their knowledge. But what about the organisation? Maybe they have some policies about what employees can share? To be sure one must ask someone who has knowledge about such issues, working inside the organisation (Kvale, 1997).

**Confidentiality**

In this case, there could be some important data, which could be revealed when the research is published. The researcher must make sure that such data is not available to the public. People involved in the research have a right to their privacy, and this should not be broken (Kvale, 1997).

**2.7 Method Discussion**

Heidegger (1962 cited in Johns, 2010) claims that one must be aware that a researcher’s background in the end most likely will influence understandings – this, because we exist in the world and it is as simple as that. This makes people behave differently, in some situation. Because of this, Heidegger has an idea in how to precede to continue, where fore- structure could enhance structure to the background. He is mentioning three aspects, of importance, fore- having fore- sight and fore- conception. As mentioned, one should think of whom I am. What is my background, where do I come from and what am I aiming for? Keeping this in mind, then one could better understand that there is more than one side of a story. Thus, keeping a neutral and open minded understanding about a specific context one is situated in. Like Bentz and (Shapiro, 1998 cited in Johns, 2003), who are considering both Western and Buddhism
thinking and putting their thoughts together in their work, Mindful inquiry in social research. This work is a mixture of: Buddhism, critical social science and phenomenology within the spiral of Mindful inquiry. This work includes a number of values which some of them could be considered when using a hermeneutic philosophy. Some examples are shown below:

- Humans and researchers existence is a process, that is ongoing and where we are interpreting others and oneself as well as cultures and subcultures.

- Awareness through development is not solely intellectual or a cognitive process, it is a whole representing how people are living their lives.

Further issues that have to be regarded during a research are objectivity. This could be an issue when performing research on your own. Other important things that have to be taken into account are both reliability and validity. These could strengthen the credibility of a research. Through having a critical standpoint regarding its results and comparing it to existing theories then could one come closer to the truth.

During analysis the researcher must question respondents’ credibility. Further is that sources of material and documentation must be questioned and thought about, if these are credible? Other issues to think about are the generalization of this thesis and on what level is it valid macro, meso or micro?

Validity and Reliability

In Jacobsen (2002, p.21) we can read the following statements:

1. “The empirical data must be valid and relevant.
2. The empirical data must be reliable and trustworthy”.

Jacobsen (2002) wrote that when data is gathered, the researcher must think in terms of validity and relevance. And that we initially measure what we were intended to measure. And also, that it could be considered to be valid, if compared to a larger amount of respondents. Further, we must think of the internal-, external validity and relevancy.

The second statement, is about that the research has to be reliable; we need a result, that is measuring the things we are interested in, and which could be trustworthy. So how could I be sure about these above statements? I think this could be reached, by using a hermeneutic philosophy and a hermeneutic spiral in a combination with an abductive approach.

I further think that if one is considering my prior knowledge and background, and uses this in a mixture with new acquired knowledge, about the company and topics of interest. Then I would like to believe that I have taken the necessary steps to fulfill the required statements and which also should be in line with my methodological discussions.
3 Literature

In this part valuable aspects from the literature will be considered and briefly discussed in the literature introduction. This will hopefully give you as a reader a short and informative background to the most important topics used; in an effort to solve my research aims, objectives, research questions and purpose. Important topics are introduced in this chapter, thoroughly examined and elaborated, giving me a solid theoretical foundation to make this thesis.

3.1 Literature Introduction

First of all I would like to mention knowledge. Knowledge is an important subject, having a strong connection to innovation. According to Arnswald (2002) knowledge inhabited in humans is naturally and KM is also much rooted in theories concerning organisational culture. In Arnswald (2002), both Gadamer and Wittgenstein have the same opinion; our inheritance resends from a particular background. And the society and culture we belong to, has been created by historical events. This unfolded in a historical process of society reveals that – values and expectations changes among individuals, in regard of their work roles; thus, organisational parameters of design will also be changed. Conversely are changes in values due to changes in: technology, lifestyles, habitats, communications and cognitive structures. This can deeply alter a society’s probability of survival.

When it comes to KM, this domain is much about practices for gaining external knowledge, and to interact with other organisations. Knowledge management includes involvement of sharing and utilization of knowledge within the enterprise. In such a case trust, values and norms will have a significant and important impact on the functionality of the external relations and in the exchange of knowledge in the enterprise. “Given this, building social capital may be a vital part of an enterprise’s innovation strategies. The term “social capital” has many meanings outside of economic analysis, and this can lead to confusion. Network capital has been used as an alternative” (OECD, 2005, p.77). When it comes to KM, McAdam and Reid (2001) further states that it influence on organisations, both internally and externally – especially when it comes to theories of storage and transfer of knowledge in different organisational cultures.

If you think culture is important, then, you might consider that knowledge is essentially a human process, which is manipulated, where interpretation and reflection cannot be split from the culture (Baskerville and Dulipovici, 2006). And since the intranet, “E-gate” in this thesis is used globally. Where conversations and social life are shared across borders by using Web 2.0 tools, and where “language is the primary vehicle for expression, linguistic meaning becomes a crucial component of social life” (Arnswald, 2002, p.29). Web 2.0 tools are thus significant in making an impact in how to adjust to globalization, and in the way organisations are sharing and transferring knowledge.

At present, in the 21th century – knowledge could be thought as a key organisational resource, which ought to be exploited strategically, extensively and be accomplished with organisations’ knowledge-assets (Newell, 2005). As earlier stated, Web 2.0 has become an important factor for organisations – where the potential benefits using such tools will make the companies, more quickly going towards the use of Web 2.0 technologies. When organisations later are striving to make some benefits, then they will take notice of that the usage of these technologies, requires both time and efforts in adjusting the company to a new way of making business. By using tools available
through Web 2.0 there is an opportunity, which could lead to benefits. But risks are also included and that could cause a catastrophe. Risks are often connected to security and governance of problems. Whilst others have problems understanding Web 2.0 and what it can do to create a positive effect in their business. Organisations often do try to understand how upcoming technologies influence business and with a larger focus on technology. And in such cases humans are often forgotten. Thus, there are cultural barriers, which are counteracting the implementation and use of new applications. Or otherwise, like where traditional attitudes are a negligent adoption of an open-standard platform, which could give outsiders unique visibility to the inside of the inner workings of the organisation. “Yet proponents of Web 2.0 says it is only by permitting greater transparency, and by fostering greater collaboration and knowledge sharing across organisational boundaries, that make companies can reap the benefits of tomorrow’s emerging technologies” (Matuszak, 2007, p.11).

However, there are not just benefits in using Web 2.0. Or as Gaudin (2010) wrote, there are also downsides in using it. And in this case Web 2.0 technology can give time to overload and less face to face meetings. This in turn could result in feelings of isolation. Other issues could be related to the employees who in many cases are writing on website communities, and do not have sufficient or required expertise (Culver, 2010 cited in Gaudin, 2010). Failure often is seen when organisations are trying to meet the future and embracing the use of Web 2.0 technologies, trying to make the best of it. If competitors cannot gain any advantages, from using these technologies or succeeding to embrace the use of Web 2.0 technologies; which seems to be an issue, according to Gartner (2010 cited in Revell, 2011)? Then IT-dominated social media efforts will fail in over 70 percent of the times, during 2012. Mc Affe (2009) writes that Enterprise 2.0 is an organisation using Web 2.0 technologies. Further Revell (2011) mentions enterprise 2.0, and he also has some arguments, about why organisations should start to embrace this phenomenon. In this case he presents the following:

- “The impact of technologies such as social network, wikis and microblogs on management and performance showed that deploying these technologies to create network that foster innovative collaboration highly correlated with market share gains.

- At a global energy services company, geographic and business unit boundaries prevent managers from accessing the best talent to solve clients’ technical problems. The company set up new innovation communities across units. These networks have helped speed up service delivery while improving quality by 48 percent” (Revell, 2011).

Revell (2011) sums up, that Enterprise 2.0 makes so that collaboration is available to global organisations. And this involves change management, such as implementing new technologies; with a structured approach, enabling collaboration including new roles - taking advantages, understanding issues, related to innovation. The above statements could be considered as important aspects. And when trying to manage these socio-technical perspectives, one should enlighten the assumptions about, in how to proceed further, embracing development of innovation in organisations. But, in order to do this, one needs to understand the socio-technical perspective, and how it positively could influence organisations. And make an impact on its employees. One implication could be that socio-technical phenomena are both contextual and organisational (Trist, 1997).
3.2 Socio-technical Perspective

The socio-technical concept was born in conjunction with field projects, and was performed by the Tavistock Institute, in the coal-mining industry in Britain (Emery and Trist, 1960 cited in Ropol, 1999). Socio-technical organisations could be seen as being dependant on their material means and resources for their outputs. In this case are the core interfaces human systems, nonhuman system and which have a relation between them (Emery, 1959).

And with this in mind, regarding individuals and their working roles and if looking at it from a historical perspective, then could we see humans usually are changing values and expectations. This affects organisational design and makes it more complex. Socio-technical can be divided into two parts socio and technical. The former is constituted by people and society; the latter is concerning machines and technology. Socio-technical is about the interrelatedness, between social- and technical factors, which relies on two principles. The first is about the interaction of technical- and social factors.

The other principle discussed is about joint optimization, of either socio- or technical side. This is often caused by unpredictable relationships, in regard of system performance. The socio-technical term is also often just a description of a mixture of people and technology – which strives to design organisations which are displaying open system properties, in an effort of improving management of environmental complexity, competition, new technology or competition (Walker, et al., 2009). In scientific purposes, practical issues or among individuals –there is a need to isolate problems in areas such as: Primary group organisation, supervision design of machinery for human convenience, selection, incentive schemes, job evaluation and management organisation (Emery, 1959). In this case a lot of specialists have the same opinions that problems are interrelated. “Beyond a certain point the solution of one kind of problem depends upon solving some of the others” (Emery, 1959, p.1).

Nevertheless, there is a difference among systems. All are not profoundly rooted in a socio-technical manner and one can evidently distinguish between operative and regulative institutions, where the socio-technical is more considered than the former. The latter, is vis-à-vis the psycho-social attributes within members, concerning cultures and norms. In socio-technical systems, an organisation relies in a much higher grade on resources which are receiving an output and also on material resources. The core in this is related to non human system, and a human system and their cooperative. Further, one also could see a mix of these both forms, which might cause conflicts.

Additional is that the socio-technical concept is about: “Interdependencies, organisational environment, and self regulation” (Emery, 1959 cited in Trist 1997). Cherns (2000) further writes that engineers must be thinking of the survival of social system. And carry the functions, of Parson’s (1951) four subsystems, which are as follows:

1. “attainment of the goals of the organisation
2. adaptation to the environment
3. integration of the activities of the people in the organisation, including their solution of conflict, whether task-based, organisation-based or interpersonally-based;
4. providing for the continued occupation of the essential roles through recruitment and socialization” Cherns (2000, pp.2-4)
Such thinking will give advantages for designers, getting rid of thwart, facilitating functionalities of planning. But a question remains. What is necessary to do in social system design? Designs are dependent on developers' objectives, related to that all are socio-technical systems, where a joint mixture of technical system and social system best will meet the objectives (Cherns, 2000).

Other issues are that task performance is evidently providing problems and so is supervision et cetera. This raises the question. Should enterprises be open or closed systems in relation to its environment? Often enterprises do use open systems and are growing through internal evolvement and keeps a steady state of throughputs, regardless of the environmental changes, that occurs. In an effort of keeping stability, using an open system, enterprises could only achieve this through the illumination of external and internal environmental connections and their relations (Emery, 1959).

Regular commerce further will make so that an enterprise could exist – this through regular commerce regarding products or services. This is done with other institutions, enterprises or individuals in any external social environment (Emery, 1959). So, organisational activity needs physical support where people willingly are contributing to the development of services, or by material throughput. Circumstances are hard to define in which an open system performs a steady state if one not considers the mediating boundaries, in which the system works, according to Von Bertalanffy (1950 cited in Emery, 1959). The technological components in such cases can be seen playing the role of mediators, following the open system and will come to be called a socio-technical system. Thus, Williams (1950 cited in Emery, 1959), proposes some general thoughts, telling us to separate economical issues and social- technological systems. It could be good to think about this, which defines a so called political system. But in the beginning one should concentrate on the identification, of substantive components and its characteristics. Later on looking at economical- and political systems. “An enterprise is a body of people and material means; analytically, one should abstract, from the concrete social relations existing between these things, aspects concerning allocation of limited resources for consumption or production, power and responsibility, etc” (Emery, 1959, p.3).

**Socio-technical Design**

According to Lehaney (2004) socio-technical design could in some way, be seen as a philosophy of organisational change and include the ten principles, which are derived from Chern. These principles are as follows:

1. **Compatibility:** Design has to satisfy an array of objectives which may conflict, and therefore decisions must be reached by consensus through participation and not by power plays.
2. **Minimal critical specification:** Success has been measured less by design quality then by quantity of our own ideas and preferences that are incorporated. Assumptions should be challenged and minimal boundaries enforced on design work. The less that is pre-specified as a must have, the more likely that the design will be innovative.
3. **Variance control:** The social system is more than an effective system for the control of the technical and raw material variances. Rules are not required outside of what the work team enforces.
4. **Boundary location:** Its essential feature is that boundaries should not be drawn so as to impede the sharing of knowledge and learning. Thus one would expect
multi-functional teams working across department boundaries to follow the process and to permit teams to complete a process within their own boundaries.

5. **Information flow:** The principles of boundary location counsels against, if it cannot absolutely prohibit, the interruption of information or the insertion of loops by misplaced organisational boundaries. Cherns comments here on the information associated with power games that are rife in organisations. If a work-team completes a process within its own boundaries, all the information it requires will be available to it and sticky knowledge could be shared. There will not be the opportunity for information to be withheld or manipulated in favor of the organisational members.

6. **Power and authority:** People require the power and authority to command the necessary resources for their work and should take the concomitant responsibility for them. Thus work-teams will be able to ask for and receive all the necessary resources to perform their work. They will have the devolved decision making power.

7. **The multifunctional principle:** Organisations must need to adapt to their environments; elements of organisations need to adapt to their environments of which the most important are usually other organisational elements. There is both an internal and external environment which all organisational work is carried out. Processes and organisational work needs to take account of both these environments and adapt to any changes that are taking place in either.

8. **Support congruence:** Pay people for what they know, not for what they do. Their value is in their heads. This is difficult but relates to differential pay and rewards for learning, and also perhaps knowledge sharing and knowledge creation. Thus organisations may reward people for undertaking courses and training.

9. **Transitional organisations:** Organisations are likely to be transforming themselves continuously in reaction to their changing environments. The transitional organisation is both different and also more complex than either the old organisation was, or the new organisation will be, in either situation. The manner of the treatment of the staff in selection, for either corporation into the new organisation or in a separation from the old, demonstrates very clearly the adherence to the socio-technical principles.

10. **Incompletion:** Cherns also calls this the forth bridge principle. He emphasizes that all periods of stability are in effect only temporary periods of transition between one state and another. Redesign should be a continuous process and is the function of the self-regulating teams through review, evaluation and negotiation. This would, of course, contribute to the transitional organisation” (Lehaney, 2004, pp.64-66).
Enterprises as Socio-technical Systems

When and if one is going to analyze an enterprise. Then one should know there are some components, which have to be considered and which one should be knowledgeable about. The following and in the specific order when analysing, should be known, according to (Emery, 1959):

1) “the technical and
2) the "work relationship structure" and its occupational roles.

- The analysis of the interrelation of these parts with particular reference to the problems of internal coordination and control thus created.
- The detection and analysis of the relevant external environment of the enterprise and the way the enterprise manages its relation to it” (Emery, 1959, p.3).

These above components could be used, if and when studying parts of an enterprise. When it comes to primary work groups, the relevant environment will be comprised by the enterprise. This, since it defines, the ends of these groups and controls the input of both people and materials; and continuously it will have an influence on, group performance (Emery, 1959). The concept of roles will take us forth, revealing information about that: Workers do not act alone, but rather in a role feeling and “dependency, subordination, self-worth, trust, isolation etc” (Emery, 1959, p.13).

Primary Work Systems

Trist (1997) pinpoints that an interest in social and technical relations arose much due to primary work systems, these systems were crucial in regard of the initiation of field projects. Further they were also important because they provided a solid route in which a broader level could be reached. Where the systems are performing activities, and are caught up in an expressed and bounded subsystem about the entire organisation; with single face-to-face groups, or a number of such groups, this jointly with the support of a specialist staff and representatives from management, including resources and other equipment. These systems with a common purpose, to unify people and their activities; where societies are making technological choices, which are expressions of their own world view. Further, societal possibilities might be taken up, due to new technology – where elaboration could either be constructive or destructive, with several of unanticipated consequences (Trist, 1997).

Work Relationship

(Trist and Bamforth, 1951 cited in Trist, 1997, p.13), “have postulated that the demands created by a technological systems are met first by bringing into existence a work relation- ship structure”. Further, Trist and Bamforth (1951 cited in Trist, 1997) claim that a professional role must support identification of the individual’s location, in their work-relationships and structures, related to the production process. The employees’ roles are the relationship in a group’s social organisation, and the production process. This could be seen when one path is related to tasks and the other is related to each other; in the other are people also related to one another (Trist and Bamforth, 1951 cited in Trist, 1997). A task may seem distasteful and meaningless, but it is often compensated through new role aspects, like social relations with other co-workers. These relationships are often weak and could be further explored through other concepts, related to the role relationship instead of social relations, which are better suited to attract people’s ends.
“Interdependencies are co-related primarily to role relationships rather than to interpersonal relations, i.e., social relations formed to cope with task demands rather than informal social relations” (Emery, 1959, p.14). A formal role structure is hard to map and define against a task structure – in this case could group-responsibility be the thing that closes this gap and make the definition of roles much clearer, according to task interdependency. But unfortunately there is a lack of basis in a group with a small number of people. Who is doing a whole task, satisfying both psychological and social needs, in regard to its members? Similar is task-performance and those doing it, are the most satisfactory and efficient group. Group size is an eminent issue in work-relationship structures, which are related to tasks. This has been reflected by the semi-ideological human relations movement. They propose the friendliness factor, as critical in the group cohesiveness and propose a work of friendship theory. In this theory there are three propositions, as seen in the following figure:

![Figure 3.3 The premises of the human relations movement (own picture based on Emery, 1959, p.16).](image)

- “Friendliness on the job leads to better individual adjustment to the task.
- Friendliness leads to greater willingness to help.
- Interaction leads to greater "knowledge of others" and hence to more effective cooperation” (Emery, 1959, p.16).

### 3.3 Innovation

One needs to understand why technological change occurs and why organisations should innovate. The basic ideas of OECD are that one seeks rents. These ideas are derived from Schumpeter’s work. New technological devices are seen as a source of advantage to innovators. If there are any productivity-enhancing process innovations, then one might gain cost advantages over competitors. This could give a higher mark-up on the current market price. Or, there is the availability to combine a lower price and higher mark-up than competitors depending on flexibility of demand. This to further gain market share and hunt for rent. “In the case of product innovation, the firm gets a monopoly position, this due to either a patent (legal monopoly) or to the delay before competitors can imitate it” (OECD, 2001, p.16). A monopoly position contributes to set a higher price compared and achievable in a competitive market. Because of this, one could gain a better rent (OECD, 2001).

An innovation is the implementation of a new or significantly improved product (goods or service). It could even be a process, a new marketing method, a new organisational method in business practices, workplace organisation or external relations (OECD, 2005, p.45). This definition is very broad. Innovation is an area with a
lot of issues and possibilities which one needs to have in mind. An innovation could not just be categorized in one single aspect because this matter could be targeted, for example, as a product or process innovation. In order for an innovation to be considered as an innovation, then some criteria have to be fulfilled. In the marketing method, product, process or organisational method, these innovations must be new to the firm, or significantly improved.

When looking at innovation a broad perspective in policy discussions and research of innovation are often a highlighted magnitude. An asset in organisations that must be considered playing an important part in the innovation process is R&D. But much of the innovation activities are not R&D-based. Instead, highly skilled workers interacting with others outside the organisation, seems to be highly important for learning and to exploit knowledge (OECD, 2005).

**Innovation Activities**

In case of activities, one could look at the following: Scientific, organisational, financial, technological and commercial steps, which are intended to lead to the implementation of an innovation. Innovation activities could be innovations in themselves, whilst other are not novel activities, but which are required when implementing innovations. Innovation activities also include R&D, but which not necessarily is involved in developing a specific innovation.

Further issues regarding innovation are that activities in an organisation are involving engagements, in well-defined innovation projects. As well as when looking at other organisations the primary might then be constituted by continuous improvements of products, processes and operations. But, these organisations could also be innovative; innovation could be an implementation of a single significant change or smaller incremental changes, which together constitute a significant change (OECD, 2005).

Innovative firms are those, which have had an innovative act implemented during a period of review. A product/process innovative firm is also those that have implemented a new or significantly improved product or process, during the period under review (OECD, 2005, p.47). In aspects of involved parties, there are a huge number of actors taking part more than ever before, during an innovation. These actors come from a wide variety of aspects, forming a unity of people, derived from different domains, such as civil society and philanthropic organisations. Thus policies to promote it – should be modified and aligned with the environment. Further there is a need to prepare an extensive variety of actors that could carry out innovative actions and benefit from its results.

In economical change, innovation is at the heart. “In Schumpeter’s words, “radical” innovations shape big changes in the world, whereas “incremental” innovations fill in the process of change continuously. Schumpeter has proposed a list of various types of innovations as follows:

- "introduction of a new product or a qualitative change in an existing product;
- process innovation new to an industry;
- the opening of a new market;
- development of new sources of supply for raw materials or other inputs;
- changes in industrial organisation” (OECD, 2000, p.16).

This above list, have later been modified and the result are as follows:

- “Introduction of new products.
• Introduction of new methods of production.
• Opening of new markets.
• Development of new sources of supply for raw materials or other inputs.
• Creation of new market structures in an industry” (OECD, 2005, p. 29).

3.3.1 Main Types of Innovation

If we are talking about innovations, then the OSLO manual does make difference between four types of innovations: Product innovations, process innovations, marketing innovations and organisational innovations (OECD, 2005).

Product Innovations

“A product innovation is the introduction of a goods or service “product” that is new or significantly improved with respect to its characteristics or intended uses. This includes significant improvements in technical specifications, components and materials, incorporated software, user friendliness or other functional characteristics” (OECD, 2005 p.48). Product innovation makes use of new knowledge and technologies or is based on new uses or a combination of accessible knowledge and or technologies. This type of innovation comprises the introduction of significant improvements and functionality or user characteristics of present goods and services. Further, should developments in new areas of use and with a minor technological changes in specifications, also be accounted for as an innovation.

Other changes could be major improvements to existing products when it comes to materials, components or just other types of characteristics, but which will enable better performance, efficiency and speed or just by adding new functionality. One example is design, which might not be suitable and shall be categorized as a product innovation. Design could also be labelled as a marketing innovation (OECD, 2005).

Process Innovations

A process innovation is the implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software (OECD, 2005 p.49). Similar, innovations could be used to decrease unit costs and delivery of production or to increase the quality.

Other deliverables could be to produce or deliver new improved products. An innovation might include improved methods for the construction and provision of services. Also, huge differences in either software or equipment used in services-oriented firms, with great improvements of either procedures or techniques and which is used in service delivery, could be seen as a process innovation.

Further, which is distinguished in innovations, are new or significantly enhanced techniques, equipment or software, which are related to additional support activities. Further we might think of things derived from: Purchasing, accounting, computing, maintenance, information and communication technology (ICT), or just an implementation of something new and which all have the common features to deliver something that is drastically improved (OECD, 2005).
Marketing Innovations

“A marketing innovation is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing” (OECD, 2005, p.49). In marketing innovations, there is an effort in trying to address customer needs in a better way, or just to open up new markets. It could also be to positioning a new product on the market, where the most important objective is to increase sales.

Often when such things are involved in these kinds of innovations then is it often about significant changes in product designs, which could be a part of a new marketing concept. In this case is a product design change about changes in product form and appearance. And in such a way, that the product’s functionality or user characteristics will not be modified. Further innovations in product designs are often related to significant changes, in: Form, appearance, taste of food and beverage products. New marketing methods are also, an important central element, and which mostly involves the introduction of new sale channels (OECD, 2005).

Organisational Innovation

“An organisational innovation is the implementation of a new organisational method in the firm’s business practices, workplace organisation or external relation” (OECD, 2005, p.51). When it comes to this kind of innovation it is an important part, which could increase a firm’s performance through reduction of costs in administration and transactions, followed by an effort of improving the workplace satisfaction:

“(And thus labour productivity), gaining access to non tradable assets (such as non-codified external knowledge) or reducing costs of supplies” (OECD, 2005, p.51).

A distinguishing organisational innovation refers to strategic decisions, taken by management, and which has not been used prior, or are included in the results. These methods could include routines and procedures for the conduct of work, such as new practices, in order to improve learning and knowledge sharing, within the organisation. Examples of this could be – the first implementation of practices, in order to codify knowledge. Others could be the implementation of practice, to enhance employee development, management systems, supply chain management and lean production etc.

Distribution of responsibilities and decision making among employees are an innovation in a workplace organisation. This would engage the implementation of new methods, to the division of work within and or among activities in a firm or organisational units.

Furthermore, new concepts could be applied to structural activities like integration of different business activities. External relations are also much concerned, when new organisational methods are used for the first time. This involves the implementation of new ways of organizing relations among other firms or public institutions. This might bring forth or result in new types of collaborations or integration with others, such as: Research organisations, customers, suppliers, outsourcing or subcontracting of business activities in production, procuring, distribution, recruitment and secondary services. Methods that already exist and which are in use could not be accounted for as new organisational innovations.

Innovation Policies

Innovations, which are a significantly improved product, process or method, will increasingly be more desirable in order to create growth and employment and improve living standards. The intangible assets across firms are widely invested in, in a number
of OECD countries. These investments made are similar in R&D, software, databases and skills, as it is in physical capital, like equipment or structures.

If policies are to be effective, then promotion of innovation must be reflected in the ways in which innovation happens today. A transformation of an invention in order to become an innovation needs a lot of extra activities, such as: Organisational changes, firm-level training, testing, marketing, and design. Today, science is one of the most important parts of innovation, but as it is, it encompasses a lot more than just R&D. Another factor is that innovation seldom occurs in isolation. Innovations are very interactive and multidisciplinary processes, and progressively more involves collaboration, by a rising of various networks of stakeholders, institutions and users.

One could say that human capital is the essence of innovation, where humans need to be empowered, in order for innovation to take place. Further the needs are broad and relevant, in education and development of widespread skills, which could complement formal education. In organisations, innovation openness differs because of factors like the importance of the technology for the organisation, or the current strategy in the firm or the industrial characteristic in the industry (OECD, 2005).

**Innovation and Skills**

In a European Commission Green Paper one can read that the innovative firm, has an amount of characteristic features and that these can be divided into two major categories of skills:

- “strategic skills: long-term view; ability to identify and even anticipate market trends; willingness and ability to collect, process, and assimilate technological and economic information; among the various operational departments, and external co-operation with public research, consultancies, customers and supplier; involvement of the whole of the firm in the process of change, and investment in human resources” (OECD, 2000, p.15).

Other activities of innovation, which covers areas such as invention, implementation, breakthroughs and improvements requires a wide range of skills, as mentioned below:

- Basic skills and digital age literacy
- Academic skills
- Technical skills
- Generic skills
- Soft skills
- Leadership (OECD, 2000)

**Innovation – technology, Open Source and Social Media**

“Sharing platforms constitute the social capital of an information society” according to Bourdieu, Coleman and Frank et al. (1986; 1988; 2004 cited in Ferguson, 2011, p.229). But, still in a number of organisations is fear evident to integrate such technology and to invite audiences into their operations. Supposedly “in 2010 the technologies best capable of supporting an innovative economy are open source in nature; the most valuable organisational asset is social capital; and strategic planning for communication of innovation must reflect the character of audience fashioned by social media” (Ferguson, 2011, p.229). This is also characterized, by speed and flexibility, which are consistent with open innovation and open source, which confirms the viability in an open system to create boundaryless organisations. Today social media does the trick, narrowing down the boundaries among organisations, both when it
comes to content, technology and organisational public trends. And open source interests have increasingly evolved in the academic world, and theories of open innovation are luring organisations today. Despite this, not many organisations are having an understandable (if any) policy dealing with the social media, which they have adopted (Ferguson, 2011).

In recognition of social media, inevitably it will lure audience that seeks attention and recognition. Many sites have had drop outs, due to the lack of social media. In an effort of stimulating the users, organisations then could use both monetary and non monetary incentives, trying to motivate their users. Such incentives will include a list with top innovators, or just to acknowledge users with a high participation rate. Huberman et al. (2009 cited in Ferguson, 2011, p.235) writes: “People are often willing to forego financial gain to obtain notice”. Other encouraging things available to the audience in a social media would involve participants disclosing information freely. This manner could also have an effect on others to do the same. Not only when it comes to personal issues; but it should also include public expectations on corporate entities and leaders to share knowledge and information, even when it comes to the negative. This is also in regard of how business is done and which could lead to transparency.

Christensen (1997 cited in Ferguson, 2011, p.237), explains why great organisations fail when they are facing disruptive technologies. Like, when using new technological applications in different areas like social media. Organisations should try to sustain current technology through small increments. Otherwise organisations will be facing disruptive innovations, which normally forces one to think in new ways, about services, products and markets. Under these circumstances is it relatively seldom that a large organisation could cope well. Because knowledge does not resides among a few or a couple of organisations; thus the term open innovation.

In open source movement, are users of Linux also the developers of the technology, and no other individual, or organisation will holds the rights to Linux. Due to this, both people and groups will participate to create the perceived social reality. Such as Bers (2005), being a social constructionist, claims that identifying and recombining new social ends for products which already exist, and where services should put an emphasis in open-source innovation research. Whether this is used or not in organisations, such an approach would be a recommendation to all large companies; that in some way have experienced any difficulties, when trying to cope with disruptive innovations (Ferguson, 2011).

Social constructivism could be adapted in an organisational sphere, with sense-making models and integrated concepts, which are corresponding to attribution of meaning in a collaborative who is sharing a context. Self-awareness and reflection will for sure affect people after a while, and people who is constantly being in the centre in modern society and which focuses on “YOU” is appropriately when validating of the essence of human’s reflexivity, in contemporary society. According to Cook (2008 cited in Ferguson, 2011) social media, will fulfil functions which are acknowledged by organisations and which might be necessary and managed by a social media administrator. Cook is talking about the following functions:

- Communication
- Collaboration
- Cooperation
- Connection

Communication in organisations could be seen as one of the most important aspects, and constitute the lifeblood in organisations and which is a vital criterion for
communicative competence, to improve effective leadership. Mintzberg (1973 cited in Kaufmann and Kaufmann, 1995) states that leaders are using as much as 80% of their working hours in communication, both written and oral. The communication process concretely consists of silence, face to face, telephone calls, written letters, report reading and electronic mails.

New electronic communication channels such as the intranet are becoming an important factor in organisations today. Thus, information overload has become a prominent issue. This is often causing individual stress related problems, due to the fact that individuals have a limited capability, in the receiving process and information storage. Further, the lack of social contact necessary will also create stress related issues.

Communication is in addition a must, to create and inspire motivation in organisations, strengthening social connections among leaders/coworkers and group members. This in an effort creating a good learning environment inside the organisation, where feedback is crucial because individuals do need this, in regard of their working efficiency and in order to reduce the uncertainty which might occur. And it will also promote and support individual needs for natural acquaintance (Kaufmann and Kaufmann, 1995).

Open Innovation

(Chesbrough, 2003 cited in Ferguson, 2011, p.237) is the one who introduced open innovation, “due to disruptive technology”. This is about going outside apprehending, “develop or out-license innovative ideas and intellectual property”, beyond organisational boundaries. To sustain viability, organisations therefore must create fresh structures inside the company, in order to give birth to organisations which foster independent behavior or acquiring another company with values and processes, coping with demands, and at the same time serve the latest task (Christensen and Overdorf, 2000 cited in Ferguson, 2011).

Companies trying to retain their core capabilities are traditionally develop internally. Open innovation in comparison is a far better, less risky way, compared with in-house development. When the objective is to diversify this is likely to be done in terms of technology and/or markets. And where a larger bases of ideas and technologies are some of the main benefits, obviously. Other benefits could be better flexibility, responsiveness at lower costs and speed of exploitation. And it also captures economical values which could be derived from inward licensing or spinning out of unused ideas.

Further a sense of urgency will be created, letting internal innovators either use or lose in-house available knowledge and technologies. Open innovation has drawbacks, which one needs to be aware of. Such as, extra costs to manage cooperation with external partners, or an unfavorable impact on organisational flexibility. Or lack of control dependence on other external parties. And the opportunistic actions maybe made by partners. It could also be more complicated when human resource management and management of different partners, are vital aspects of open innovation. This is to some extent much because of the reason, that the success is dependent on the involved external partners which will become a part of the organisational innovation activities. Another risk with open innovation are the loss of competences and greater dependence on external actors. Important factors, for innovative organisations are to gain access to markets and human capital (OECD, 2005)
Objectives and Effects of Innovations

Innovation activities in enterprises has a cause, where an effort is to adjust the objectives related to products, markets, efficiency, quality or the capacities to learn and to implement changes. Further one idea is to find out about the motives for innovation in enterprises, which would be of assistance in the examination of relevant forces, which will have an impact on innovation. These forces could be competition or new opportunities for entering a market, which drive innovation activities. Additional, both data and objectives could provide additional valuable information about the characteristics of innovations. Also when organisations are engaged in innovation the activities must be identified, through economic objectives. These in terms of products, markets and number of goals, along with its significant impact which is in reach for organisations. This should also be related to innovative activities, so during this case are a number of objectives in general relevant (OECD, 2005).

Sources of Information for Innovation

According to OECD (2005), are a number of sources relevant when trying to create innovation. These are as follows:

“Internal sources within the firm or business group:
- in-house R&D;
- marketing;
- production;
- other internal sources.

External market/commercial sources:
- competitors;
- acquisition of embodied technology;
- acquisition of disembodied technology;
- clients or customers;
- consultancy firms;
- suppliers of equipment, materials, components and software.

Educational/research institutions:
- higher education institutions;
- government research institutes;
- private research institutes.

Generally available information:
- patent disclosures;
- professional conferences, meetings and journals;
- fairs and exhibitions” (OECD, 2001, p.51).
Factors Hampering Innovation Activities

In the following section a list of different factors is represented, which most likely will work as obstacles or barriers against an innovation. Sometimes, there are reasons why organisations should avoid innovating. And also reasons why innovation results, will not be as earlier suspected, and where activities do not give the desired results. The following list of factors is hampering innovation activities, and could be modified to meet national requirements.

**Economic factors**
- excessive perceived risks;
- cost too high;
- lack of appropriate sources of finance;
- pay-off period of innovation too long.

**Enterprise factors**
- innovation potential (R&D, design, etc.) insufficient;
- lack of skilled personnel;
- lack of information on technology;
- lack of information on markets;
- innovation expenditure hard to control;
- resistance to change in the firm;
- deficiencies in the availability of external services;
- lack of opportunities for co-operation.

**Other reasons**
- lack of technological opportunity;
- lack of infrastructure;
- no need to innovate due to earlier innovations;
- weakness of property rights;
- legislation, norms, regulations, standards, taxation;
- customers unresponsive to new products and processes (OECD, 2001, p.52).

**Innovation Linkages**

Innovative activities in an enterprise depend in part on the variety and structure of its link to sources of information, knowledge, technologies, practices, human- and financial resources, where linkages act as sources of knowledge and technology.

In an enterprise innovation is an activity ranging from passive sources of information to suppliers of embodied and disembodied knowledge and technology for co-operative partnerships.

Linkages can also be related to any of the four types of innovations, (i.e.) product, process, marketing or organisational innovation. Each linkage connects the innovating enterprise to other actors, in the innovation system such as: Government laboratories, universities, policy departments, regulators, competitors, suppliers and customers (OECD, 2005, p.76).

Further, a linkage could also be dependent on the market or it could be about the nature of the enterprise which is the dependant factor (Dierkes, 2003 cited in OECD, 2005). Linkage interaction plays a crucial role and has influences on information or knowledge, which can be obtained where a less linkage will not engage interpersonal contact, and which also is a one-way information flow. Seen from another perspective is working relationships closely bound to each other and are also interactive linkages and
involves a great deal of contact with suppliers. In order to receive and provide codified information, tacit knowledge and real-time problem-solving, there is a need for assistance. To gain benefit from a linkage, then knowledge must be shared in the enterprise, and also be channelled properly, into the development of new products, processes and other kinds of innovations (OECD, 2001).

3.4 Enterprise 2.0 & Web 2.0

Mc Affe (2009) argues that an Enterprise 2.0 is the phenomenon that happens when organisations are adopting approaches and tools of Web 2.0. “The distinctiveness of Web 2.0, of which social networking software (SNS) is a major part, can be attributed to a shift of emphasis towards user-generated content coupled with mechanisms that enable and enhance user interaction” (Alison and Merchant, 2009, p.4).

And according to Revell (2011) Enterprise 2.0 involves elements such as technology, content/topic, processes and culture. Another statement proposed by Mc Affe (2009) is the emergent social software platforms connected to Enterprise 2.0, to reach their given goals. Thereby, the focus is on organisations and its use of ESSPs, including a number of different participants, which involves: “Prospective customers, participants-employees, customers, suppliers and so on” (Mc Affe, 2009).

In an Enterprise 2.0 organisations could benefit from adapting Web 2.0 tools. Such an adaption could give the organisation increased efficiency, in areas like: Collaboration, innovation and also an enhanced productivity. Further implications in this area are that it could reduce problems. O’Reilly gives an explanation of Web 2.0, and defines it as follows: “Web 2.0 is the business revolution in the computer industry caused by the move to the Internet as platform, and an attempt to understand the rules for success on the new platform” (O’Reilly, 2005).

“Chief here regarding the rules is to build applications that could harness network effects in order to enhance the more people use them” (O’Reilly, 2006). But, if to say that organisations are using Web 2.0 then there has to be a social layer otherwise one could not claim that it is a Web 2.0 application.

Further it has to be easy to use and understand it, not spending time trying to figure out how the technology is working. And the users must be able to contribute to the content making it edible otherwise it is not more than it was before and thus, it could not be called Web 2.0 (Van Der Vlist et al., 2007).

Web 2.0 and its proponents proposes that through embracing greater transparency, and also taking care of collaboration and knowledge sharing across organisational boundaries; companies could then make better use of new technology (Matuszak, 2007). One challenge which organisations will meet is to maximize the benefits of using Web 2.0 technologies, still protecting the organisation and its assets (Matuszak, 2007). In 2005 Tim O’Reilly coined the phrase Web 2.0, which incorporates lots of different tools. The following figure some ideas of the differences between its predecessor Web 1.0 are shown:
Enabling employees to do more

Further information about Web 2.0 is illustrated in Appendix 2, which O'Reilly calls Web 2.0 Meme Map. O’Reilly and Battelle (2009, p.1) argue that, “Web 2.0 is all about harnessing collective intelligence”. In collective intelligence, applications first depend on managing understanding and responding to massive amounts, of user-generated data in real time. And the subsystems “of the emerging internet operating system are increasingly data subsystems: location, identity (of people, products, and places), and the skeins of meaning that tie them together”.

Leistner (2010) proposes that there has been a trend during the last years in the usage of social media tools and processes. Leistner (2010) argues about which trends are going from the external Web, and then into the organisational environment, described as Enterprise 2.0. So, to recognize the Web and where it is on its way one should look at the fundamental ideas, which underpins Web 2.0. In this case network applications are important and these are systems which harness collective intelligence. These can also be called, crowd sourcing, which involves larger groups of people; who together creates a collective work, and where the value far exceeds individuals’ own efforts (O’Reilly and Battelle, 2009).

Technologies of Web 2.0 can connect employees and also let people work and share knowledge, in a much better way. And in these cases, organisations can take advantage of knowledge sharing. Especially, among employees with special skills, who utilizes information available and refines it. Because of this, decisions are made on information, and which are refined to better fit the organisation, trying to solve problems. “Web 2.0 has the potential to create network effects that leverage the productive power of the group, improving both the quantity and the quality of work” (Matuszak, 2007, p.5). “Enabling employees to do more—and do it more efficiently—has always been a fundamental business goal” (Matuszak, 2007, p.5).

The benefits from using Web 2.0 will do so that many companies will start using it. But a great deal of organisations will in their effort come to discover challenges and barriers, which have to be addressed, prior to realization of such new technologies and to benefit from its full potential. Such issues could be relevant in areas, of security and governance. But there are no disputes about the benefits that Web 2.0 will deliver to organisations (Matuszak, 2007). Using and taking advantage of metadata are one of the great features of Web 2.0, enabling the building of databases, capturing metadata and taking care of its surrounding ecosystem (O’Reilly and Battelle, 2009). And this in an Enterprise 2.0, where there is a discontinuity of breaking boundaries seen from an
organisational interest and in areas of virtual workspaces. This when it comes to open up the organisation to, “external players (customers, suppliers, partners), and the rethinking about the traditional schemes of collaboration, knowledge sharing, and management, of functional, and hierarchical relations, so questioning the rigid stereotypes regarding the workspace and work hours” (Corso, Martini and Pesoli, 2009, p.226).

In order to become a social enterprise one could use some models. And no matter what models used. A social enterprise is a good opportunity and a fundamental confrontation when using such a model. During a period of time costs will decrease, tools will become more efficient and people will be able to connect to each other, where huge amounts of information will be shared. But thus geographical issues and time barriers will also be prevented, followed by organisational barriers that could stop communication and knowledge transfer. This could create new dimensions of effectiveness, strategic and organisational flexibility (Corso, Martini and Pesoli, 2009).

As follows, there are four different models that can be used, in a social enterprise:

**Teams**: Environments target to focused communities, which often short lived because they are instrumental to achieving a shared but “transient” goal.

**Agorae**: “Open” Communities with limited members’ focus on cohesion, which often result in transient involvement and variable levels of interactivity.

**Family**: Let the members create and disseminate contents (wiki, document management, blogs etc).

**Clubs**: Communities of people who have shared interest but are poorly cohesive” (Corso, Martini and Pesoli, 2009, p.231).

In the following we can see the impact of the different models which could be implemented.

![Diagram of Team, Agora, Family, Club models](image)

Figure 3.2 “Impact of Social Enterprises on processes, connections and knowledge” (Corso, Martini and Pesoli, 2009, p.233).
3.4.1  Innovative Processes in Product Development

Below we can see a figure, showing success indicators and the responding strategic enablers in product development.

Figure 3.6 Success indicators and corresponding strategic enablers in new product development commercialization, and life cycle performance (own picture based on Rafinejad, D., 2007, p.18).

Rafinejad (2007) claims that product development often is hard work not managing to give result. And thus will frustration become an object, although there is a desire to triumphant. Often in these cases are failures due to that in work within product development, efforts made often do miss out in doing the whole job. And by doing the whole job, Rafinejad means:

- “Having a business strategy that is communicated to the development team.
- Having an integrated technology/market/value chain strategy that is understood by development team members
- Having a capable team that understands the market priorities
- Executing the development project with agility and real-time responsiveness to the changing conditions of the marketplace and the consumer” (Rafinejad, 2007, pp.2-3).

Often time is limited, resources are not enough and technology is challenging. And if top management do not share information then this might be due to that they think that the information are confidential and that the team does not need to know about it. Another reason could be that a team is not considered mature enough, or it might be to maintain one's own power. But, “nothing is more harmful to do the whole job of developing a commercially successful new product than withholding information” (Rafinejad, 2007, p.3). IT could improve efficiency and effectiveness in all aspects of business, and that have an impact on the development or commercialization of a new product. IT enables better efficiency, preservation and applications of knowledge and it also has an influence on the information flow in marketing systems (Rafinejad, 2007). “IT can be applied where information flows, i.e. in all aspects of the marketing system to perceive, create and deliver customer value” (Rafinejad, 2007, p.11).
Incentives

O’Reilly and his colleagues have evaluated some companies, organisations and sites, that represented Web 2.0, the following companies was examined: Wikipedia, Facebook, MySpace, Delicious, YouTube, Flickr, Blogging utilities, Google and craigslist (McAfee, 2009). On these sites, certain incentives have been made, like in Google which distributed cash prizes and T-shirts to traders who were the most efficient inside the internal market.

This also led to the contribution of ESSP, and people started to talk more about Enterprise 2.0. In other organisations, ESSP has been a formal part of the job description, which has contributed to boost the effect of the ESSP. Incentives in organisations could also make the non believers, to technological change, to become interested in the use of this new technology. So, they are later starting to contribute with their experience, in digital form through blogging and wikis or by using answer-boards (McAfee, 2009).

3.5 Knowledge Management

Core processes in products, markets and knowledge could be considered to be what constitutes an organisation. Essential to the operations of enterprises are decisions in how to utilize and exchanging existing knowledge, and how to retrieve new knowledge. In such cases there is a need for systems in organisations to be able to manage such knowledge, in order to enhance competitiveness and the innovative capabilities.

KM involves a set of activities which relates to the capturing, use and sharing of knowledge. Further, it should engage management, both when it comes to external linkages and knowledge-flows in-house.

Other including methods or procedures in search of external knowledge, is to establish a closer relationship, with other subsidiaries, enterprises (suppliers, competitors), research institutions or customers.

Beyond practices for gaining new knowledge, KM also involves methods regarding the sharing and using of knowledge, as well as establishing value systems to: Codifying the routines, sharing knowledge and practices. The following examples of knowledge management practices are intended to improve the use of information and internal flows, are as follows:

- “Databases of worker “best practices”.
- Regular education or training programs.
- Informal and formal work teams that promote worker communication and interaction.
- Integration of activities, which promotes interaction among employees from different areas, for example engineers and production workers” (OECD 2005, p.87).

Organisations spend millions on information systems today, to capture knowledge or by the use of consultants helping them to make use of knowledge and share it better. McLean (2004, p.1) expresses some thoughts regarding this: “Rely on innovation for new products and services to provide them with growth in revenue. And yet, one must ask the question. What do we really know about how knowledge is created within and shared across”?

KM has emerged as an essential field of research and practice, in information systems. This field is built on theoretical foundations of information economics,
artificial intelligence, strategic management, organisational culture, organisational performance measurement, organisational behavior, organisational structure and quality management (Baskerville and Dulipovici, 2006). Mair (2004) claims that, organisations need to establish a way to use human knowledge and to take care of their knowledge by sharing it through a knowledge management system. When organisations are using knowledge management, this could improve the creativity, operational effectiveness, quality of products and services in organisations (Wiig, 1993 cited in Baskerville and Dulipovici, 2006).

This in many ways could be challenging, especially when it comes to the tacit knowledge, this is a difficult thing to share and which could be frustrating for any organisation, when trying to utilize such knowledge. But, some important models could be of assistance in knowledge management. According to Mc Adam and Reid (2001) there are also key dimensions of knowledge management. First of all there is the intellectual capital model by Barker and Barker (1997). Next are the knowledge category models by Nonaka and Takeuchi (1995). The last models are socially constructed models by Demarest (1997).

Further information about knowledge is that it is a natural part of humans, which deals a lot with organisational cultures, especially regarding theories about storage and transfer of knowledge; and this is true in some organisational cultures.

In an organisation some people are responsible for knowledge; these are called “Knowledge Crew” the expression was first coined, by Nonaka, and Takeuchi. Crew members responsibilities are identification, promotion and creation of knowledge inside the company.

Three key people, belonging to this so called knowledge crew: The knowledge officers (top management), knowledge practitioners (front-line employees) and knowledge engineers (middle managers), (AL-Hakim and Hassan, 2011). Nonaka, and Takeuchi, which also have created the SECI model, which can be seen in figure 3.3. Further they have been criticized for their poor empirical material, regarding knowledge creation and the coherence of the conversation mode (Gourlay, 2003).

### 3.5.1 Knowledge and Knowledge Flow

Organisations need a level of support: drivership. Organisations are in principle small with few people and you can thereby not rely on self-organisation principles and coincidences internally. From a tool perspective automation will play an important role in the future, but it could solely not solve problems related to knowledge flows. In such case is text mining and categorization an assist and enables constructions of ontologies (nature of being) and taxonomies (classification of groups based on shared characteristics), which is an aid to folksonomies (social classification).

Further issues are, “dealing with highly dynamic environments, where static- and human-built taxonomies will not be able to keep up with the speed of change” (Leistner, 2010, p.157). Thus, knowledge flows could be defined by the network itself and it could also be assisted with social networking analysis, both when it comes to external-, and internal environments, of the organisation, as well as, across boundaries. This in an effort of visualizing knowledge flows through analyzing them and optimize them, most likely the efficiency of knowledge flow management will increase.

When analyzing knowledge, the key information must be valid and correct. It should not be based on wrong information from people. Business analytics plays a major role when analyzing knowledge, but evidently cannot be seen as a whole. Because knowledge as in innovation is created and flourishes in other types of technological assets.
“It also happens at the border where technologies and humans touch, so one important question on any type of knowledge flow management initiative is about the cut-off point along human technologies continuum; the cut-off point is different for different types of knowledge. It will also constantly change; as technology evolves, it will lean more to increased usage of technology. A new question arise and people get to a higher level, it might also move back to grasp and require more of human intelligence” (Leistner, 2010, p.157).

In order to sort this out an organisation maybe will need guidance like a high-level strategic initiative – motivation, and productivity will then hopefully be enhanced through this. Human activity cut-off point gives more control, but it will also negatively make an impact on productivity. In a technology cut-off point perspective, one must notice the alignment between what is happening, followed by a higher level of flexibility to endorse process changes; if disregarded trust to technology could vanish.

There are in many cases often these causes, which are supporting the underestimation of developments, and which is based on technology. Technology itself will not make success; involvement of people is crucial, and such issues are multidimensional when trying to motivate users in the use of technology, often in a larger scale (Leistner, 2010).

As the dimensions as follows:

“Motivation
- Financial research is poor motivation and usually backfires on you.
- Different people are motivated by different drivers – work with a portfolio of drivers
- Reduce demotivation to give motivation a change to develop
- You cannot tell anyone to be motivated

Reward and Recognition
- Different participants need different drivers
- Use a portfolio approach – do not rely on one driver only
- Design a system of drivers that contain redundancy

Roles
- Develop special knowledge support roles
- Built or hire experts to fill intermediary roles
- Where you cannot build knowledge flow management expertise, buy it or have people obtain it via external communities
- Anybody can be a sponsor, not just executives
- Make sure your knowledge intermediaries bring the right mix of passion, service mentality and human and technical understanding

Scaling
- Do not underestimate the value the scaling can bring, even within the organisation
- Visualize scaling effects to your key stakeholders
- Go global – and make sure your environment support that move

Support
- Do not limit support to technical support
- Include usage support” (Leistner, 2010, p.169).

“In traditional Western epistemology (the theory of knowledge) knowledge is defined as “justified true belief” However this is an absolute, static and non human view
of knowledge and fails to address the relative, dynamic and humanistic dimensions of knowledge. Knowledge is context-specific and rational. Knowledge is dynamic, as it is dynamically created in social interactions” (Nonaka, Konno and Toyana, 2001, p.14). Knowledge could be seen as humanistic, and it has both an active and subjective nature. Two types of knowledge exist, explicit and tacit, where explicit could be expressed in numbers or words shared through data, scientific formulae, specifications, manuals and like readily transmitted between individuals both formally and systematically. Tacit knowledge is highly personal, hard to formalize and difficult to communicate or share.

In this case are subjective insight and intuition examples of what deeply could be rooted in the individual’s experience, action, ideals, values, or emotions and which are embraced by this person. The interactions between these two knowledge types are crucial when it comes to knowledge. They are complementing each other in the knowledge creation process one should know. This emergent interaction is a process between individuals who are interacting in a social process, which is not confined within the person itself (Nonaka, Konno and Toyana, 2001). There are four different modes of conversation as the SECI model is illustrating:

![SECI Model](image)

Figure 3.3 Showing four types of ba, Nonaka, Borucki and Konno (1994 cited in Nonaka, Konno and Toyana, 2001, p.20).

In figure 3.3, the thought is that knowledge is produced, during a continuous and dynamical interaction with explicit and tacit knowledge. Like in a spiral, where knowledge is created in each mode of a knowledge conversation, and this when there is an interaction among them. This spiral process is called organisational knowledge creation, and where the beginning starts at an individual stage and goes up through intensifying communities in an interaction, which crosses: Divisional, departmental, sectional and organisational boundaries (Nonaka, Konno and Toyana, 2001). The term socialization, expresses the importance “of joint activities in the process of converting new tacit knowledge through shared experiences” (Nonaka, Konno and Toyana, 2001, p.14).

Table 3.1 Showing the “factors that constitute the knowledge-conversion process” by Nonaka, Borucki and Konno (1994 cited in Nonaka, Konno and Toyana, 2001, p.15).

<table>
<thead>
<tr>
<th>Socialization from tacit to tacit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tacit knowledge accumulation</td>
</tr>
<tr>
<td>Extra-firm information collection (wandering outside)</td>
</tr>
<tr>
<td>Intra-firm social information collection (wandering inside)</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Transfer of tacit knowledge</td>
</tr>
<tr>
<td><strong>Externalization: From tacit to explicit (creating concepts)</strong></td>
</tr>
<tr>
<td><strong>Combination: From explicit to explicit</strong></td>
</tr>
<tr>
<td><strong>Acquisition and integration</strong></td>
</tr>
<tr>
<td><strong>Synthesis and processing</strong></td>
</tr>
<tr>
<td><strong>Dissemination</strong></td>
</tr>
<tr>
<td><strong>Internalization: From explicit to tacit</strong></td>
</tr>
<tr>
<td><strong>Personal experience; real world knowledge acquisition</strong></td>
</tr>
<tr>
<td><strong>Simulation and experimentation; virtual-world knowledge acquisition</strong></td>
</tr>
</tbody>
</table>

**Knowledge Ba**

Ba, a Japanese word, is integrated knowledge collected from different areas. It creates the platform for transcendental perspectives, which emerges in order to integrate and create knowledge, where interaction is considered as an important factor. Ba is not
only about physical space, ba is also about specific time and space, where the space involves an interpersonal relationship.

Ba is space and shared time for upcoming relationships between individuals and groups, in order to create knowledge. When taking part in ba, it is to be involved and to transcend in partial perspective or boundary. Through ba, one could achieve better of two worlds. Individuals understand each other in ba as a part of the environment. Further one could see that knowledge is residing inside ba, and is acquired through one’s own experiences of others. Knowledge separated from ba will become information.

Ba consists of four types: Dialoguing, originating, systematizing and exercising. Every type assists a specific mode of knowledge conversation, between explicit-, and tacit knowledge, and also a platform is given for detailed step of the knowledge spiral process. But these different relationships among single ba and conversations are not exclusive. Successful knowledge creation is de facto, to understand the different characteristics of ba, and also the interaction that happens among them. The characteristic belonging to each ba is as follows (Nonaka, Konno and Toyana, 2001).

**Socialization** | **Externalization**
---|---
**Originating Ba** | **Dialoguing Ba**
Face-to-face | Peer-to-peer
**Exercising Ba** | **Systematizing Ba**
On-the-site | Collaboration

Figure 3.4 Showing four types of ba (Nonaka and Nishiguchi, 2001, p.20)

**Originating ba;** is a world where emotions, feelings, mental models and experiences, are shared amongst individuals. Barriers are removed and a synchronized behavior appears, where care, trust, love, commitment, freedom and safety emerge.

**Dialoguing ba;** is more about consciously constructions, where one should choose a specific knowledge and capabilities, in a mix, to suit a specific team involved in a project. The terminology in this matter, involves dialogue through mental models and skills, which is converted to ordinary terms and concepts. Collective reflection is incorporated in the organisational culture

**Systemizing ba;** involves virtual worlds, where individuals could interact, instead of in the reality. Collaborative environments shares explicit knowledge and are heavily supported by those with complementary ICT, such as online networks (intranet or Internet)

**Exercising BA;** explicit knowledge becomes tacit knowledge, through facilitated internalization, where the emphasis are on training senior mentors and colleagues, through exercises, prioritizing patterns and to follow such patterns.
**Advantages**

Advantages of multinational enterprises in knowledge creation, is typically depending on one or more of subsequent characteristics, as follows:

**Variety in environmental stimuli:** Because MNEs are exposed to more competitors, customers and technology stimulus to innovation, they have the ability to discover an environmental signal.

**Dispersed innovation centers:** They have centers, emphasizing on innovation locally and which could be used geographically widespread.

**Joint knowledge creation:** Innovation centers might use resources and capabilities in a joint force, creating knowledge through their network.

**Community of Practice and Collective Intelligence**

Maries and Scarlat (2011) propose that knowledge-assets will give organisations a competitive advantage. As tacit knowledge, which lies within individual’s experiences and explicit knowledge, which often is managed in organisations by the use of social networks, in order to capture interactions, trying to evolve the community based knowledge. This has developed a number of organisational communities of practice. These communities are working as a tool and are the core of collective learning and collective intelligence, to enhance sharing and development of knowledge across boundaries.

Communities of practice will carry forth the ability to analyze and explore, giving the opportunity to find new solutions to a problem, this through an emerging social-reservoir. Which will be appearing among practitioners such as, knowledge producers, or policy makers, and which is enabling the improvement of the innovation process and product efficiency. “Communities of practice represent social structures suitable for creating, developing and sharing knowledge in and provide an efficient organisational framework for achieving the creative and learning functions” (Maries and Scarlat, 2011, p.75). Wenger and Snyder (2000 cited in Maier, 2004, p.174) state that one could not measure value inside a community itself, because the effects are delayed and results are coming from work groups, project teams or likewise. Because of this organisations could interview community participants, gathering stories of success, “which often illustrate higher benefits than efforts made for keeping up a community”.

Future organisations will have to adapt and benefit from utilizing knowledge network teams. This in order to take care of the creative power sustained from project communities and open source. And which relies much on individuals’ own passions to work together in a global society. Collaboration and development among members, within teams will be the sustaining factor, contributing to better performance.

Collective intelligence, include collective perception, discernment, collective imagination, intuition, collective memory and collaborative learning, where, self organizing learning communities, like communities of practice are communities who share knowledge (Maries and Scarlat, 2011). According to Maries and Scarlat (2011, p.76) we can find some “key characteristic of communities of practice” as below:

- Sustained mutual relationships, both harmonious and conflictual
- Shared ways of engaging in working together
- Knowing what others know and what they can do
- Common background, shared stories
- Certain styles and habits recognized as displaying membership
- Mutually defining identities
- Specific tools, representations and artifacts
- Rapid propagation of innovation
- Absence of introductions, if is not the first interaction
- Quick setup of a problem to discuss
- Shared repertoire reflecting a certain perspective on the world

Communities of practice have a starting point usually connected to shared problems or a shared need. Knowledge, information and best practice are in focus in these communities, where individuals are mutually anxious, regarding the collective learning process. Thus, many communities of practices will be emerging in a most natural way, where participants rely on previous trusts and relations. This collaboration does not reflect that there is a need for an advanced institutional infrastructure, where time and space is available, to sustain a collaborative environment (Maries and Scarlat, 2011).

When there is a further elaboration of content of collective intelligence, it is to be considered as shared intelligence, which emerges when individuals are collaborating. “The use of new informational technologies should be orientated to collective intelligence field for helping people think, develop and implement ideas collectively” (Maries and Scarlat, 2011, p.75).

In recent time, Google and Wikipedia have emerged and which could be considered as collective intelligence. Collective intelligence is a group of people having the ability to solve a larger set of problems, in comparison of individual solutions (Maries and Scarlat, 2011).

**Web Based Collective Intelligence**

Web 2.0, changed classical business models and integrated customers, to be a part of the production process, adding additional value to the organisation. If the customers in a sense are a part of the production, then Web 2.0 could raise new phenomenon, enabling collective intelligence through customers more actively participating in the organisational evolution. Sadly few methods and approaches cannot take care of such collective intelligence.

One example of doing this is crowd sourcing, which integrates web-based collective intelligence. In order to grasp the collective intelligence, there are some building blocks with several different combinations of phenomena of web-based collective intelligence as shown in the following figure (Ickler, 2010):
Huysman and De Wit further state that knowledge sharing is treated like a learning process, an obstruction that is causing traps inside areas such as ICT, individual learning, and management.

**ICT trap**: Explicit attention is essential, making knowledge sharing a part of the routine. It is a trap to just to focus on ICT because this is a limited area. When it comes to knowledge sharing, then are social networks frequently more important factors.

**Individual learning trap**: Knowledge sharing is treated like a learning process, and just considering individuals and is not looking at the entire organisation. This should not be confused with organisational learning, which is about the collective acceptance, which is used between individuals who shares knowledge.

**Management trap**: There is a tendency, to support the management perspective too much in knowledge sharing and disregard the employees' knowledge. Managing of knowledge sharing is structured to acquire-, exchange-, using knowledge, supporting business processes inside the organisation. This, strategic perspective involves both long-, and short term initiatives, in regard of, objective organisational realizations (Huysman and De Wit, 2002).

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Figure 3.5 “Building blocks of web-based collective intelligence” (own picture based on Malone et al., 2009 cited in Ickler, 2010, p.29).

### 3.5.2 Knowledge Sharing

How can knowledge sharing become better in organisations? This is an issue, when trying to share knowledge in organisations. Organisational culture and the people belonging to it and promotion of knowledge sharing are some of the more crucial matters, which an organisation will meet, when trying to increase knowledge sharing.

Other important areas are about capabilities to share knowledge. Including, the “relationship between the source and the recipient, the form and location of the knowledge, the recipient’s learning predisposition, and the broader environment in which the sharing occurs” (Cummings, 2003, p.3).

Huysman and De Wit (2002) debate knowledge sharing and argue about whom is taking part in this activity. And where it could be found? And also how it could be shared? Huysman and De Wit further state that there are three critical aspects in knowledge sharing. First mentioned is managing knowledge and the second is how to learn from knowledge sharing; the third activity is about ICT and how it could support knowledge sharing. These are important issues, if knowledge sharing will be institutionalized and a part of the daily routines. If these statements are not given the proper attention, then an organisation might end up in an obstruction of knowledge sharing, which is causing traps inside areas such as ICT, individual learning and management.
3.5.3 Knowledge Transfer

In the 21st century, we can see that organisations think of knowledge as a vital factor in the competitive arena. Organisations are also informed about the benefits of taking care of knowledge inside the organisation and in this case there are lots of benefits.

But, when looking at this, there are some problems. According to Newell (2005) there are three key central characteristics appearing. One is that knowledge is distributed; the other is that knowledge is ambiguous; the third is regarding knowledge as potentially disruptive. Sue Newell does mean:

**Distributed knowledge:** This could cause huge problems for organisations. Because, when an organisation is trying to retrieve knowledge from one source to a recipient, then the information must be useful to those receiving it. Further, we do not know where to find useful information. And there is also another problem. We might possess knowledge others are in use of but which we are not aware of.

**Knowledge is ambiguous:** When we are trying to accept the knowledge this causes problems because we all have a different view of the world and the expected knowledge does not suit ourselves.

**Knowledge is disruptive:** In this case, it will cause a problem when receiving the accepted knowledge, which will transform the current state of practice. This does especially happens when the knowledge undermines us.

Other issues which arise are about different barriers, challenges and the transfer of abstract conceptualizations, such as codified knowledge stated in how-to manuals, best practice templates and lessons learned databases (Newell, 2005).

If we could understand the difficulties of transferring knowledge, and the things that are characteristic, regarding this matter, then could the design of information systems be improved and better suit knowledge transfer. In this case explicit knowledge would also be available to others. Further implications that could cause some problems are shown in the following table:
Table 3.2 “The Characteristics of knowledge that make its transfer Problematic” (Newell, 2005, p.287).

<table>
<thead>
<tr>
<th>Knowledge characteristic</th>
<th>Distributed</th>
<th>Ambiguous</th>
<th>Disruptive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barrier related to learning cycle</td>
<td>No concrete experience, so is lack of awareness that knowledge exists that may be useful</td>
<td>Close-mindedness, so that reflective observations of others do not make sense</td>
<td>Resistance to power-knowledge shifts, so refusal to engage in active experimentation</td>
</tr>
<tr>
<td>Challenge</td>
<td>Remove knowledge blinkers</td>
<td>Open knowledge cage</td>
<td>Unlock knowing straight-jacket</td>
</tr>
<tr>
<td>Technical systems</td>
<td>Databases; search engines</td>
<td>Communication tools</td>
<td>Online discussion forums</td>
</tr>
<tr>
<td>Social systems</td>
<td>Knowledge brokers; intermediaries</td>
<td>Perspective-taking and trust building activities</td>
<td>Reciprocity and the creation of new Communities of Practice</td>
</tr>
<tr>
<td>Purpose/use</td>
<td>Knowledge transfer within function/profession</td>
<td>Knowledge transfer across functions/professions</td>
<td>Knowledge transfer to change practice</td>
</tr>
</tbody>
</table>

“Knowledge transfer is not a linear process managed by administrators. It is a matter of cultural changes with knowledge as integral to culture” (Ennals, Totterdill and Parrington, 2011, p.3).

**Knowledge Transfer and Learning**

“Knowledge transfer implies that each individual/group/organisational unit need not learn from scratch but can rather learn from the experiences of others. Kolb’s (1984) learning cycle is a useful framework through which to explore this” (Kolb 1984, cited in Newell, 2005, p.276). In this case, there are four processes that must be accomplished in order to learn. First mentioned is, “concrete experience, observational reflection, abstract conceptualization, and active experimentation”, where the organisation starts at the concrete experience” (Kolb 1984, cited in Newell, 2005, p.276).

Like if a project team that has gone through some work over a period of time, then, they would gain concrete experiences, through this. When a particular milestone is finished, one could observe the outcome and make some reflections about why special objectives were not reached, in regard of standards required (observational reflection). Further, development of hypotheses (abstract conceptualization) could be done to clarify the appearance of poor performance, if one thinks that time is the triggering factor when trying to build the project team. And which also causes an escalation of the bad trust which resides in the team, and which also could cause so that the team has a poor communication (active experimentation). In order to take care of this "time" issue organisations should be engaged in team-building exercises, to erase conflicts and create a better team spirit (Kolb, 1984 cited in Newell, 2005). If this will not do the trick, new hypotheses should be developed “(abstract conceptualizations), and test these (active experimentation), i.e., iterate through the learning cycle Kolb” (Kolb, 1984 cited in Newell, 2005, p.277).
But if success appears during communication the learning cycle is completed, and one should then see this in an aspect of knowledge transfer. Then the recommendations will be developed and shared with other teams; in order to gain the shared significance, of team-building at project start. This is about the transference of codified abstract conceptualizations, insuring other teams about that this problem, can be avoided and not necessarily does need to be made twice. Teams should instead start to learn through and from such an above stated transference. The following is a picture of the learning cycle:

Figure 3.5 “The Learning Cycle and The Cognitive and Behavioral Work involved in Learning” (own picture based on Newell, 2005, p.277).

In the learning cycle, behavioral- and cognitive works are involved in learning (Huber, 1991 cited in Newell, 2005). Or as Newell (2005, p.277) writes, learning from “actual experiences (concrete experience), and experimentation and practice to find out what works best (active experimentation)”.

In a perspective of knowledge could abstract conceptualizations be codified and transferred and could resolve in that others do not need to be engaged in situated practice or mental processing, they just need to follow instructions instead, such as manuals, advices or best template of practice. Emphasizing on limitations in such mentioned views through the identification of characteristics of knowledge, this could make a transfer more problematic, than one might think.

Through recognition of problems in knowledge transferring and its characteristics one could improve the current position, and when designing “socio-technical systems that can support the effective sharing of, and learning from, other’s experience” (Newell, 2005, p.277). In contrast is experiential learning with its origin in “learn by doing”, a contribution from Dewey (1938) and Lewin’s (1946) action research model. This approach tries to encourage practitioners’ feelings. And further reflecting upon helping them when trying to validate new behaviors, solutions and strategies, this accompanied with both emotional and cognitive responses in order to encourage them (Pfeiffer and Ballew, 1988 cited in McPherson and Nunes, 2004).

3.6 Organisational Culture

From a socio-technical perspective when organisations are trying to boost the effect of knowledge management, trying to create new innovations, then organisations must think about organisational culture, because of that there are cultural barriers. Like when it comes to the adoption and use of new applications, when people try to share knowledge, by using Web 2.0 technologies. This could be more difficult than one could imagine. It could be dependent on that there is no general description, explaining the nature of the organisational culture and what the culture is all about. An explanation
about organisational culture, is that it is manifested in e.g., in artifacts, language, symbols, norms, behavior, heroes, stories, myths, legends, beliefs, values and attitudes, ethical codes, basic assumptions and organisational history (Drumm, 1991 cited in Maier, 2004).

Furthermore, organisational culture is sometimes also used as a metaphor or as an objective entity, either considering the organisation as a whole, likewise, as a part consisting of behavioral and/or cognitive characteristics (Maier, 2004, p.189). But first of all is that an organisation has to know that knowledge is coming from humans, and humans are most likely to put up some resistance, often when organisations are trying to take advantage of knowledge of the employees. “Organisational culture in general greatly influences how an organisation handles knowledge” (Maier, 2004, p.189). In organisational culture theory, some areas will most likely have a great impact on knowledge management. Such as shown below:

- Organisational culture
- Cultural values
- Power, control, and trust (Baskerville and Dulipovici, 2006)

Cultural issues could in some cases cause problems, when people work together. And this is much because of geographical distances. In every geographical region different cultures can arise and evolve. Disputes appear, especially when there is an effort to bring joint workforces together from different geographical areas. Often during such a scenario, it happens that severe conflicts could arise (Bang, 1988).

However, in organisational cultures vital elements constitute the core of it, which earlier have been stated. And as Schreyögg (1992 cited in Maier, 2004, p.189) writes: “Corresponding research is yet another interdisciplinary field, just like knowledge management”, and suggests that organisational culture, could be seen, as the following statements:

- “An implicit phenomenon
- Is “lived” and thus natural and obvious to the members of the organisation
- Comprise collective orientations and values that impact the individual’s behavior
- Result of a learning process about how the organisation has dealt with the internal and external environment
- Provides patterns for the selection and interpretation of behavior and thus provides orientation in a complex world
- Is handed on in a social process (socialization)”

Besides this and in regard of Bang (1988), three factors are influencing on culture, and how it evolves, people, ambient determinants and culture development process, which implicates the following:

**People:** Individuals have different work roles and different backgrounds, which are creating an organisational culture.

**Ambient determinants:** These are factors, which is hard to influence on, like an employee/organisation.

**Culture development process:** Goal orientated as employees are and working as a whole to create new insights through their work. And this is from which organisational
cultures evolves and is due to an interaction, among three factors: Employees, ambient determinants and issues, which will have an influence on the organisation during its lifespan. When Bang illustrates these factors, he is doing this through a figure which is as follows:

![Factors influencing cultural content](image)

Figure 3.4 Factors influencing on cultural content (own picture based on Bang 1988, p. 82)

### 3.7 Leadership

Management gurus James Kouzes, and Barry Posner wrote: “Leadership is a relationship between those who aspire to lead and those who choose to follow” (Kouzes and Posner, 2007 cited in Li, 2010, p.9). Another thing related to theory, is when social technology is thought about from a customer’s perspective among employees and how they should maintain a relationship with such technologies. Then organisations also must think in terms of business foundation and relationship. But how should one think then? According to Li, think of some relationship of your own life, and how do you manage this relationship? Are these relations dictated, are others blindly following your terms? Or is time invested in hard work? And is it undergoing trials, when you try to expand the relation? Li (2010) writes that business is no different, because it is built on relationships. One can thus see a relationship among both individual customers, the organisation and also among employees and partners.

**Information Communication Technology (ICT)**

ICT tools have to reconstruct a social reality, with its communication flow and interpersonal relationships. And sometimes supplement it, emphasizing on openness and collaboration. This, since ICT is the social fabric of knowledge and relations. It has also an important role in different perspectives, played by knowledge workplace technologies. It is constituted by web-based applications that an employee could gain access through, like the intranet of the organisation he or she works for. To further enable organisational survival, it is required that organisational leaders, continuously innovates, mutually in areas of services, business models and products, according to Magnusson and Martini (2008 cited in Corso, Martini and Pesoli, 2009).
Management must also take care of and capture knowledge from customers, competitors and technologies. Further, there is a need to take care of changes and competence reconfiguration. Hence: “A new IS generation that integrates work environment, personal relation and collaboration, can play a key role in innovation as it can” (Corso, Martini and Pesoli, 2009, p.206), important issues are as follows:

- “Promote process change and reconfiguration, shifting barriers to innovation
- Spreading vision to give workers the sense of direction and innovation stimuli
- Supporting access to knowledge and new idea generation
- Enabling collaboration between different units
- Opening organisations to capture stimuli from partners” (Corso, Martini and Pesoli, 2009, p.206).

ICT can be an enabler of change and innovation (Corso, Martini and Pesoli, 2009). In the role of IS, one could say that the user has increasingly governed this part. But, tomorrow, the main challenges that management has to deal with can be summarized, and are as follows:

- “How to stimulate, understand and anticipate demand from internal users?
- How to leverage on suppliers of external services without becoming too dependent?
- How to drive and channel energies associated with spontaneous contributions of users?
- How much and how to open external users and contributors without compromising security and intellectual property?” (Corso, Martini and Pesoli, 2009, p.235)

3.8 Knowledge Workers and Solutions with Dell, Starbucks, Toronto General Hospital and Procter & Gamble

“Technological intervention into knowledge work can be useful, but high-performing knowledge workers say that they get the most of their valuable information from other people in their social networks” (Davenport, 2005, p.162). Li (2010, pp.66-67) in regard of moving crowd sourcing, into the organisation, “in February 2007 Dell set up IdeaStorm.com, which allows customers to submit ideas and then vote for them in a Digg.com-like model. Because of the votes, Dell gets a prioritized list of which ideas to address first”. One of the first successes was launched of a Linux-based consumer PC, in just 60 days (compared to the typical 12 to 18 months). Because of this success, Dell came up with Employee Storm in June 2007; this initiative has opened up both information, and decisions. Where issues which never were up for discussion has surfaced and changed the tenor of internal communication and culture at Dell.

Also Starbucks has followed this concept based on the same platform, Salesforce Ideas, which is called My StarbucksIdea.com. In an effort of making this resonance inside the organisation, 50 people from Starbucks were secured from different areas, having the ability to oversee information, in their field. This resulted in supporting teams, giving relevant ideas, and also from the innovation director, spreading the responsibility. Through this initiative: “Wheeler was able to integrate outside innovation deeply and quickly into the Starbucks organisation” (Li, 2010, p.67).

“But how do you encourage innovation and ideas in a working environment, where people are not at the keyboard all days? This was the fundamental problem facing
Toronto General Hospital. Their solution: use the service of technology start-up Rypple to gather frequent anonymous feedback on one single question at the time. By asking one question each week, a team is able to get much higher response rates; they could quickly share responses and brainstorm solutions together. Multiple teams request feedback each week and post the result on a physical board in the hospital where everyone could see the action.

Dante Morra, the medical director of the Center for Innovation in Complex Care and staff physician at Toronto General Hospital, observed, people were quite shocked how hierarchical the organisation was and how difficult it was for different team members to speak up. This process opened up feedback channels amongst the different hierarchies, and we were able set up a model where we could create continues team improvement” (Li, 2010, pp.67-68).

“How do you encourage innovation in an organisation that believes the new ideas should come primarily from inside the company? Procter & Gamble adhered to a principle “grow from within” whereby people began and ended their careers at the company ensuring a unified global business culture” (Li, 2010, p.68).

But in 2000, when A.G Lfley new CEO started: “The company was slowly but surely slipping in its ability to innovate. The solution was to look outside searching new ideas or new discoveries. This program was called “Connect + Develop”, first one should find new ideas externally (connect externally) then bring them inside, and develop them internally (develop internally), the goal setup was reduce new product development having it produced externally” (Li, 2010, p.68).

Organisations are starting to turn to their customers for ideas: “Leveraging crowd sourcing markets like crowdSPRING, uTest and InnoCentive for design, testing and ideation, respectively. Although driven in part by economics, customers and employees are also clamoring to have a say in what is created” (Li, 2010, p.66).

“Interestingly it is not always the “most innovative” technology or a “state of the art” innovation which manages to achieve market success. In fact, an analysis of the various case studies shows that all those winning companies rely less on technology than their willingness to communicate with all the market players and to open the business in order to expand opportunities for participants” (Viardot, 2011, p.244). De Wit and Meyer (2005 cited in Hüsmann and Pfefferman, 2011, p.4) says that: “Collaborative arrangements such as a research consortium, cross-border joint ventures, market information sharing agreements, co-development contracts, or clusters are commonly used to provide flexibility in an entrepreneurial view of innovation and change”. “As intangible asset knowledge could be understood as both an essential influence factor in collaborative innovation networks to share ideas and exchange with partners and stakeholders, secondly an outcome of information exchange” according to McGee et al (2005 cited in Hülsmann, and Pfeffermann, p.5).
4 Empirical Study

In this chapter I would first like to give a short introduction about AB Electrolux and its head office, product development process and E-gate. In this very beginning are respondent information and documentation used to explain, the former mentioned areas. Further, the empirical study continues with chapter 4.2, “Perception of E-gate”, material used in this part and in the following chapters are built solely on interviews, made in AB Electrolux and Electrolux Laundry Systems Sweden AB.

4.1 AB Electrolux

"Electrolux is a global leader in household appliances and appliances for professional use, selling more than 40 million products to customers in more than 150 markets every year. The company focuses on innovative products that are thoughtfully designed, based on extensive consumer insight, to meet the real needs of consumers and professionals” (AB Electrolux, 2012c).

Electrolux Head Office Stockholm, Sweden

The organisation AB Electrolux head office in this research has about 800 employees. The organisation is considered as leaders in its field, and has been using an intranet for several years. Recently, they introduced new social media applications in their intranet, acquired through Web 2.0 technologies. Today they have also updated some features on the intranet (Personal communication, 2 April, 2012; 3 April, 2012).

4.1.1 Product Development

In AB Electrolux (2012a) “the process for consumer-driven product development is used in all new products. The focus is on innovative and energy-efficient products”. Product development is about the definitions of function, properties, color and shape. AB Electrolux develops a prototype, prepares manufacturing and investigates how the product can be distributed (AB Electrolux, 2012a). To further reduce costs and enhance efficiency, AB Electrolux has put up some initiative, in which one is to perform a “faster and more efficient process for product development through global, cross-border units in product development, design and marketing”. (AB Electrolux, 2012a, p.44). In the following figure can we see the product development process – the arrow is showing product development, which is in focus of this study.

Figure 4.1 AB Electrolux product development process (AB Electrolux, 2012a, p.36)

During the interviews, I am informed, about the product development process and that there are “local variations, but we are working towards a unified product development process” (Personal communication, 3 April, 2012).

The respondents also explain about the input to product development, which starts in phase two “identification of consumer opportunities”. This is about the initiation of consumer opportunities, understanding the customer needs, identifying trends and market possibilities. After this a set of other initiatives are performed, such as primary
development and concept development – during the product development process both are playing an important part.

Concept development is the development of design-concepts. And product-concepts are to meet a need. Concept development involves testing products as a business case it is a technical realm of possibilities, in order to create a product. Before going into product development, this is where we are. Primary development is about technical questions. When Electrolux has a concept that matches customer needs and if the technology is not in place to do it? Then they drive a primary development project to see if they can develop a technical solution, to deliver some specific needs (Personal communication, 3 April, 2012).

**Design and Innovation**

Thoughtful design is all about their design and product development, which philosophy is based around a holistic approach, with roots in the Scandinavian design traditions. Customer insight plays an important role in all aspects of the brand. “It includes functionality, usability, touch, appearance and overall user experience on all aspects of product life, from the moment when the customer begins to take an interest in the product to the purchase, installation, use and finally disposal” (AB Electrolux, 2012b). “Electrolux Design Lab is an annual design competition that will help strengthen dialog with design students regarding tomorrow’s design and product development” (AB Electrolux, 2012a, p.41)

**Innovation Triangle**

“We create “The Innovation Triangle”, which aims to promote closer collaboration within the Group, between the marketing, product development, and design units. The objective is to develop more successful products, while accelerating the pace of the development process, by leveraging synergies at global-, and regional levels. To focus, and deepen, the significance of the innovation triangle, we now have, for the first time in the history of Electrolux, a Chief Technology Officer, a Chief Marketing Officer, and a Chief Design Officer, on the Group Management team” (AB Electrolux, 2012a, p.4).

“Through close cooperation, between the Group’s marketing, R&D, and design functions – The Electrolux Innovation Triangle – it is possible to develop innovative products at a fast rate” (AB Electrolux, 2012a, p.38). “Coordination of marketing, design, and R&D resources, through the “innovation triangle” (AB Electrolux, 2012a, p.3).

![Figure 3.1 AB Electrolux the innovation triangle (AB Electrolux, 2012a, p.3)](image)

Electrolux talks a lot about the triangle because it is very important in Design, Marketing and R&D functions (Personal communication, 3 April, 2012). Cross functional work creates needs for sharing, and now in the company they really will encouraging collaboration. They have this new strategy “strategic initiative”, called the innovation triangle, which is about that all innovation in the future actually is to be
driven by a collaborative with joint forces from Design, Marketing and R&D. So to share the same vision and develop relevant solutions for the consumer, and this will definitely create a need for sharing (Personal communication, 3 April, 2012).

4.1.2 E-gate a Global Intranet

60 countries are involved, and around 16000-20000 people have the possibility to connect to the E-gate. This gives challenges such as language and cultural issues (Larsson, 2011). Information about E-gate is as follows and which could be seen in a video posted on YouTube:

“A global intranet with:
- +100 “info portals” managed by 450 editors (Episerver)
- 16000 readers monthly (95%), 9500 daily (60%)
- 825 team sites, 8500 members. Only closed (Sharepoint)
- 179 communities, 4500 members. Closed and public (IBM Connections)
- Employee networking capabilities (IBM C)” (Larsson, 2011).

The intranet is made up of three applications, Episerver version 6; this is a good tool in order to get information from primary consumers of the intranet. Episerver is an editorial tool, enabling to disseminate information or news, to a wider group of people. Important is also the website’s look, in the form of pictures and links with a customized layout. Another application is Sharepoint WSS 3.0 which later this year will be upgraded to SharePoint 2010. Respondent also says that they use IBM Connections 3:01 as a platform, then there is also Google search appliance (Personal communication, 2 April, 2012).

E-gate Mission, Goal and Objectives

Below we could see intranet key objectives:

80%
- Content to inspire and engage
- Keep employees updated
- Easy access anytime from anywhere.

20%
- Collaboration as integral part of business
- Support and engage leaders
- Implement smarter self-service (Larsson, 2011)

“Goal: Is to deliver Content Collaboration and effective self service to Electrolux employees anytime and from anywhere.

Challenge: Changing user, leadership and workplace behavior. Stop sending emails at all time” (Larsson, 2011).

Episerver version 6

Episerver is a top down tool. Episerver is first of all an editorial tool and is used to share information and to spread news to editors. This tool is also based around the editors (450) who have access to a given surface, and which are able to work with their own information in this surface when they have received new information. This is a very effective medium; information can be customized and personalized, based on your
role in the company. Episerver can also pick up the tools needed, in a job dependant on settings needed. For static pages, the employees can also work with Episerver to share policies and guidelines, with easy access. Episerver could also take care of certain information with help of a default language (Personal communication, 2 April, 2012; 3 April, 2012).

**Sharepoint WSS 3.0 & Team Sites**

Sharepoint and Team Sites are really good when working with data in a certain way as in a backend system, or just to work with data. Team Sites could be used as a backend system, to document what they need. Or archive or share with a certain audience, in this case project sites are a perfect tools, because there are large flows of information. Sharepoint is also used in a number of projects, like in closed groups where you can share documents. It corresponds to team sites on the E-gate, and a respondents experience is that it requires updating and maintenance in order to work properly (Personal communication, 2 April, 2012; 3 April, 2012).

**IBM Connections 3.01**

IBM connections is used as a down top tool and Team Sites are somewhere in the middle. The basic concepts of the Team Sites are that anyone can start a team site and anyone can order a team site. But it will take some days to get one from the IT department. IBM has also others features like “profiles”, which is the most active part of IBM connections. In profiles all employees can create a blog, wiki, forum, file and also share these in or outside a community (Personal communication, 3 April, 2012).

**IBM Connections & Communities**

A community requires a rather strong commitment. The one who starts a community is the owner of it. But owners can also invite others, to become owners or just changing the current status of a member. Further ability is to filter communities in topics. These cannot be public, but all people could create one. This is an effort in creating a dialogue among managers and people. Electrolux intranet has also information portals and news channels, where they are publishing more, rather than interacting with users. There are demands for whom it should it be. Everybody cannot have the time to read it all. Today in such an early stage it is already hard to scan the communities. One needs to maintain a directional communication. And also maintain outreaching activities, which are based on, that you know who the people are, and what we know; otherwise it will be quite stochastic. “Communities with groups or topics, and who I have been engaged in, or who, I have joined in. I could not say that I am following them on a regularly basis. One could certainly do more of this.” (Personal communication, 3 April, 2012). One says “I have not found the model to use communities in my work. First, it has to be a natural part of my work.” (Personal communication, 3 April, 2012).

Further information given is that it is hard to be able to manage a community by oneself. And that one might need to be a bigger team when managing this? One needs to be there every second of the day – for it is a requirement, that is that someone is answering in the other end instantly, or as soon as something is coming up. (Personal communication, 2 April, 2012; 3 April, 2012).

“When traffic starts to rise, it will be self-powered, but to get this start running, it is required that you visit there, every single second. So due to this my efforts have been limited to inform and support with news and information; there is not enough manpower” (Personal communication, 3 April, 2012).
4.2 Perception of E-gate

The intranet E-gate is first seen as an information carrier of news, policies and guidelines. Some respondents use it to bring out information about processes and tools. Further considered is that, E-gate is there to serve the business needs and some specific process-needs. From a technological point of view, this is having an online discussion forum, being able to go global with processes. Being able to do the background and make it visible to all. So probably there some features are missing in the current state. In comparison of previous version of the E-gate, this one is a huge improvement. In previous version there were huge gaps. “Now we only need some incremental changes. Before was it like a qualitative upgrade of the system, when changes were made. Another important thing is that information is personalized in 18 languages” (Personal communication, 2 April, 2012; 3 April, 2012).

Barriers

E-gate does not support employees’ role it is more of a base layer. If someone would like to search how recruitment is done in another country, then this information or documentation is on E-gate in a personal folder or in closed communities or within a closed team environment. But it seems like it is hard to be open, the industry and nature determine how open employees could be. “If you make everything so easy to search on the intranet, people come and go, the confidentiality intellectual property from that perspective that also constrain” (Personal communication, 3 April, 2012).

“And then there is the technology aspect, the online platform should be intuitive, and easy enough for you to learn, and share, there is not many open source information” and there are allot of internal firewalls (Personal communication, 3 April, 2012). E-gate is a rather open channel so material in this case almost needs to be public. It is quite easy for information to be shared on E-gate and to slip out of the company. One could say that this sets the level on what kind of information one could share.

Further aspects of the new intranet, is that SMS, was available in the previous version. But in this version SMS is gone, one of the respondents says: “I have had a short time to look for it; but this was a good function” (Personal communication, 3 April, 2012). Further, I asked if they have had time set aside, to learn about E-gate? The answer is no. The priorities are not high and in this case they have a need to learn it, but they do not have time to do this. Another barrier is that the feedback from leaders to E-gate is weak, due to that the schedule is tight and that there are a lot of things to do. It can also be difficult to have some effect on how E-gate is developed. Further issues are that it is difficult to find links, and it is hard to find back to previous stages on E-gate. Maybe users need to learn and understand how they have thought when they constructed E-gate.

“The main barrier at the end is people’s attention, and time is limited. I can only manage to see the front page. How could I, with this given attention, how do you let me know the golden mind, hidden in the fourth or fifth layer, that is actually very important for me, it is quite complex?” (Personal communication, 2 April, 2012; 3 April, 2012).

Motivation

There are opportunities to learn about E-gate someone can book a time and take part in an educational session. Further there is an IT department which is assisted by IT tools and which runs and maintains application to support and develop new modules and reports. “The IT platform it always so powerful but the access of capacity is sometimes
just a common phenomena of development, we have developed the IT platform so well, but in the end people only use certain features, so there are a lot of features, or capacities that is not being used to the optimum" (Personal communication, 3 April, 2012).

Assessment is done with IBM, and if a feature is missing and if we can see that this is critical and then if they need it, they will enrich the current E-gate. I asked if E-gate should sprout and grow. How can participants then be motivated? In this question I got the answer: That it should come from needs, based on their internal researches. And this should also include observation on individual levels to create needs and opportunities, putting people in the right context. Another answer was, through education and information. But one proposed that training is of course useful – but if training does not create you the opportunity, then you need to have some initiatives, where people will feel will like, oh I need to use this feature. Electrolux needs to create the right circumstances. Or as said, we need to come over the threshold. Another one says that, he tries to inspire people, to actually come over this threshold. Other issues in this area, making people to participate is that one must make E-gate applications relevant to working tasks, both on team- and individual level.

Motivate participation by context at an individual level is vital, when it comes to participation. But how should there be time one of them says? “I cannot cut out a specific time of the day, to check E-gate blogs, or communities the time is limited and is not available” (Personal communication, 3 April, 2012).

Another answer was that today we do not motivate more than that we inform about the usefulness and tell people to update their profile and to check if they have the right manager in their system. This could lead to inspire others (Personal communication, 2 April, 2012; 3 April, 2012).

4.3 E-gate and Processes

One of the projects planned for the moment is related to crowd sourcing open innovation platform. For the project in particular which the respondent is talking about is called innovation jam. So jam is actually a tool or a campaign, developed by IBM to engage employees with top management, in a strategic agenda through a 48 hour online discussion session. And this is supportive by E-gate, which is the main platform.

Global jam is where all employees are invited to a two three-day activity, in which the CEO and several executives down the organisation are with the moderators and you put a force on two-three days. This can help and make people feel that this is important, and that I have been noticed, since I have been involved in these activities.

“In the future, we are also thinking about involving external partners, to join these online discussion brainstorm sessions. So basically, that platform will play a role, collecting ideas, and then provide a platform for people, to interact. And then if it goes to global scope, then we will plug in some data, and let us do some sort of screening, of good ideas” (Personal communication, 3 April, 2012). One challenge is to work in an organisational structure, where you are working from some sort of process. Do you go to an intranet and passes on something, where you have to pick it up, from those who are in roughly the same situation?

Further another respondent is talking about the product development process. Today they are working with a rollout of an updated product development process. “It is difficult to have one of these large and complex processes, which will work on four continents, with a number of sectors and product lines. And this without having a tool
that supports it, then you goes into the wall, so to speak. But you cannot just have a tool; you have to have a good process” (Personal communication, 3 April, 2012).

When it comes to process updates, then they have a visualization tool to visualize the process. And this is still in the development stage – through E-gate, they will graphically display the process for product development, where you can drill down and go through the various stages and get information about the details of each function. Product development is virtually built up on the E-gate, wishes from E-gate employees are that they hope E-gate will influence on the process, making E-gate more important to people, working in this process through transparency and also for all the others.

Another respondent says that the point is to make this process virtual and that a process description will be available to all who have access to E-gate, this could create transparency. Another respondent is questioning whether E-gate should be the tool for open innovation or if there should be another tool connected to E-gate in this case. The point is if Electrolux should work with an innovation question, directly in E-gate or should this be taken to another platform which is better connected to the system's backend? Further, a respondent says: “But to get people to go to E-gate with his content and then cooperate with each other. I think is not only necessary for Electrolux, but also gives satisfaction to the workers, to share their knowledge and seek knowledge” (Personal communication, 3 April, 2012).

Another respondent says that there have been occasions, when the matter has been up for discussion and involving both internal- and external issues. In regard of processes and E-gate a respondent says, E-gate has just been launched and we are still in the process of being adapted to this new system (Personal communication, 2 April, 2012; 3 April, 2012).

4.4 E-gate a Social Media

When I asked if social applications are a part of their job? Then answers were. It has to be relevant to my work; in other systems I use similar functions, which are work related. Social networks can also be project-related, structured around that we have communication needs and minor that they are working with data. Chat is very good tool to use, when communicating with people in other countries, or in other time zones – because, one can see when people are online. Social application, if people really start to use them seems to be a very powerful tool according to respondents. This would be a most natural way, where people could work together, through casual conversation and interpersonal dialogue. I think that is the most powerful way to learn, and exchange knowledge rather than formal forums, and official meetings says a respondent.

Another respondent says, I think we are the wrong generation to use such functions. In another interview, I get the information that we need to look at this from a different perspective. The respondents say; one is actually that what they create has to be relevant. Because if it is relevant, why are there people not using it? It could be because it is hard for people to find, it is not intuitive enough or it can just be because people need the right circumstances, to start using it? Even if they can create the right circumstances, how will it become, after this campaign, which we have created? Will people still use this? Or will people just abandon it?

Further one says in regard of social applications: “I have not used it. But I have just put up my profile this is new to us, and I am not used, to use these functions. But suddenly there comes a point and when it will be relevant or sufficient number of people who use this example as when they realize that this is really good as well as to quickly get hold of people and stuff” (Personal communication, 3 April, 2012).
Further I get the information that it is important, when it comes to knowledge sharing, it is a part of it but it is not enough. To be effective all official must be using it in order to make it effective. In my pursuit of knowledge about social media, I asked the question. Could social functions affect you positively so that you could learn more about others? The answer is, can be so has not seen this concretely, but the background info may help you to take contact and exchange information. Available video conferences are a way when working with a separate system infrastructure, with video conferencing. There are separate systems, with connection cord, but it could be interesting to have a chat using a webcam. Would be interesting to be able to connect directly and see this person, but now is this feature not available. I also asked maybe social application could strengthen cross cultural differences? “Yes of course because lot of people they are not comfortable to share or speak up in the formal channel. So social application is encouraging, that you know empowering people, to share their opinion, and also the official channels also are quite limited, and also being a global company, it is impossible to meet in person all the time, having this social media could actually build, and strengthen the network, and to build a personal network across the continent. So from that perspective I think it is quite powerful” (Personal communication, 3 April, 2012). “My belief and hope are that E-gate in time may help to develop, and further refine and improve processes by us, working on the processes in different ways. We work with these social tools. Not underestimate the social bits of it, are the ones that get stuck” (Personal communication, 2 April, 2012; 3 April, 2012).

4.5 Knowledge Management

One respondent says in regard of knowledge sharing. “I think that it makes so you talk for Electrolux, and not about oneself; one becomes a living marketing pillar of the company you work for. But we could do better. I think too many people, are leaving the organisation with a lot of competence which could be collected” (Personal communication, 3 April, 2012). Another one says. “It is my responsibility to share and help other colleagues” (Personal communication, 3 April, 2012). Further which I could find out is that it seems like in general, that the respondents do not have any problems with sharing their knowledge. But one says, that “it would be better to hire younger employees, who would be able to work for a longer time, having a mentor, who is approaching retirement, or already has passed the retirement age, they could transfer their knowledge to the young. So let that knowledge live” (Personal communication, 3 April, 2012)!

In regard of technology the systems must be sufficiently user-friendly and where technology must work. When it comes to co-workers, there is a need for them to feel that they get something out of it. And also a need for a respondent to know, that this is what “I am working with and that this is connected to the procedures we currently have. This kind of social or community platform is supposed to actually replace or to come up with new routines, which lets you work smarter” (Personal communication, 3 April, 2012). Other statements about knowledge and E-gate are that they do not use these today to share knowledge, but the idea of E-gate is that it should be working in that way (Personal communication, 2 April, 2012; 3 April, 2012).

Barriers

E-gate is a base for information; it is the base for information and people do not have equal access and this is not good. Further, the respondents say that it is unclear what one can share. If you are talking about articles then it is pretty clear, because they are
Motivation

Motivation is a part of my job and it is about helping, and sharing with other colleagues, one respondent says. A statement made by another is that there is no motivation yet. Other motivators expressed are that it could be to have a profile or just to make sure that your profile is updated. Or just to promote competence can be counted as a motivator. Like when the CEO is on a video supporting E-gate, because employees want their managers to take it a step down. And that the CEO states that it is ok to work in this way. Further are that they together should develop routines, where the tools are will become a natural part of the way they are working and that they are working smarter together. An employee’s knowledge that is shared could make so that people take notice of them, and if someone possess this knowledge, this could lead to a new positions inside the company.

4.6 Organisational Culture

During interviews, when the participants are describing their organisational culture, I receive information that there is a strong culture. It is our Electrolux; although not all employees have the knowledge about our bases and our core values they still do understand it. But if you go abroad then are bases and core values very well known. One describes it as: “Scandinavian shared responsibility, and built on trust. The further away from its core, (Stockholm) and to some extent, the regional centers, (Charlotte, Sao Paulo / Curitiba, Brussels, Singapore) the smaller of the Scandinavian heritage” (Personal communication, 3 April, 2012).

When it comes to sharing then a lot of people are willing to do this, according to one of the respondents. The culture is similar in Sweden, but when it comes to other countries there are differences. In this case one respondent says if you could gain knowledge about a person through social applications which are vital then E-gate is a support. Strong decentralization is also used to describe the culture, with a high level of entrepreneurship, with a respect of colleagues and very informally (Personal communication, 2 April, 2012; 3 April, 2012).

Barriers

In this case language barriers are an issue and for E-gate to overcome the language barriers, then a multiple language-option will really be a useful feature. Further the “question about whether there is a support, this look great, but would our CEO accept that I spend more time, learning this stuff. If not tradition, and culture support this in regular meetings, how do you then ensure that the employees are using a digital tool, for

controlled before publication. But with the new system and where one has the opportunity to enter comments, and like what you like then are some of the respondents not aware if there is some kind of guideline for it. Another issue vital according to a respondent is one of the most important requirements. It is something they have lacked since the E-gate was addressed. And at the time it might not be likely that one can identify people working in the company, but hopefully in future this will be happening. To have the ability to identify people in the future not just with names and phone numbers, but also who they really are. And how do they look like? Who is their boss? Who are their assistants? Like such simple things and also what is their expertise and that in a multidimensional area, to be able to handle this information. Then the next thing to do is to put them in relation to each other (Personal communication, 2 April, 2012; 3 April, 2012).
this” (Personal communication, 3 April, 2012)? Another thing important is that it is an international company, and lots of differences thoughts are growing inside the organisation (Personal communication, 2 April, 2012; 3 April, 2012).

Motivation

Motivation is if you could get a dialogue between people of different cultures and through this dialogue; people can always get a greater understanding because we are interpreting and learning in different ways. I think that what we have seen in other organisations is that a social intranet could act as a bridge between cultures and values, and so on, to become more transparent. When I was asking about other things in regard of collaboration and to share among different cultures, then one answer was: “I think that it relates to the corporate culture, why do we need to share it? So if it is at the core of the organisational values, then we should actually have the people, willing to share, and that should be natural, instead of being incentivized. Given that, all the external, or whatever policy condition actually allowing that to happen. But before now. I do not see we are, you know, people to share, is based on certain incentives, and mostly based on the needs of the work. You share within a controlled environment. We are trying to streamline the sharing somehow centrally, or globally, or regional through this award ceremonies, to build best case practice, and share it globally. So I would say, it is more streamlined, than controlled” (Personal communication, 2 April, 2012; 3 April, 2012).

4.7 Leadership

Today, the leaders do not have a frequent dialogue on the E-gate. Maybe they do not understand the importance of having an intranet and good people who work there. To get employees to share, leaders will play an important role and this is fundamental to success. They need to get them to know how to do when clicking on E-gate, and like so, for example through ongoing training. One respondent tells me that nowadays, there are web meetings via Genesis, where they can invite anyone to go online in order to see how to click and ask questions and so. The respondent also says that they will begin to post short video tutorials, which will show how the intranet works.

This is important, because if you start to use new features, managers must set a good example. Actually it is important to send the right signals, about which tools to use, when starting a blog or when being active in a community. This if they want to pursue one type of discussion and set an example. “I think if you want to promote a discussion on another forum, community blog, or another tool in the E-gate. One must set an example, and choose this, as if I should have it as a communication channel, so that people are going in there, joining groups” (Personal communication, 2 April, 2012).

But, for leaders to have time for it, then communication must be a part of the strategy. So it cannot be a self-purpose, it must be like, now I bring my message in a particular area, through this channel. Then leaders will play an important role if new functions are set up, and if they are going to be used.

One very practical effort the leaders can do is to start leading by example. So if we want to strive for collaborative innovation, the leaders should start to work in this way (Personal communication, 2 April, 2012; 3 April, 2012; 18 April, 2012).

Other important issues according to (Larsson, 2011) are that “We can subscribe all to follow their leaders. Leaders can reach their work force faster to a smaller cost. It’s by far more engaging than sending e-mails. Personal informal dialogue is more effective” (Larsson, 2011).
4.8 Innovation

In this case I simply asked the question what is innovation for you? And in this case I got the following information from the respondents.

“Continuous efforts to develop, find new solutions to make things better next time then we did last time, find the best way” (Personal communication, 18 April, 2012).

“I think it is a very broadly defined term. And I think, for us innovation is we more defined that from the consumer point of view. So no matter what we bring into the market, we need to look at a consumer point of view. If they see it as something different or that is bringing in a new value to the consumer or no. That could be within a scoop of a product, or it could be a service, or it could be the overall experience, the commercial experience around the product and the solutions we offer to the market” (Personal communication, 3 April, 2012).

“To create something new that adds value to some objective function. It can be product innovations, process innovations, and it must have a direction or a goal. Just because it is something new, that does not mean that it is an innovation for me. It has to take the better cost, better consumer offer, or taking us towards an objective function. It is not only to create something new.

Just because it is new, it is not an innovation, it must have a purpose or an aim of providing better customer value, lowering costs and shorten lead times or whatever is one's goal. It has to be innovative with a purpose. One should not introduce technology into a new product for the sake of it.

Just to bring in new technology is not innovation. But if it provides better customer value, then it is an innovation. The customer is the center, we should offer products that customer’s appreciate, and also create value for them”. Other words mentioned are quality, customer understanding, customer needs, process and methodology (Personal communication, 3 April, 2012).

“Located close to creativity, and is close to the great mass creativity. For me, such as crowdsourcing, open innovation, how we together can develop improvements, further refines something that makes a product or service better in the end, but at the same time is connected to a process or structure so that we can capitalize it correctly and also manage it. For example patent is involved. An idea is an idea, as long as it is an idea it’s just an idea when it’s realized and generalized, that's when it becomes something concrete from it, that’s innovation for me.

I would say that innovation is creativity, that I think everyone has since childhood, and how can we as a company enthusiasm in this case all employees, or as many as possible to participate in this process of improvement” Further I question how this could be mediated through E-gate? The respondent answer: “It builds all the time that you know who to invite and who to pick up many times it’s about the right manager to see that there is a problem that otherwise would not see. In my opinion the E-gate can play a crucial role to make information becomes more transparent” (Personal communication, 2 April, 2012).

“For me it is quite natural that innovation is all about products, so to speak. In our company 100% of our sales on Electrolux, come from our products and nothing else. And therefore innovation is important, because we have seen that there is a direct
correlation between innovation and margin. The more innovation we have, the more margins we get.

Then there comes a cost. This is the balance between how much you spend on innovation versus how much you get back, so to speak. Which should be found within the company, and all companies have different balance points, but for me this is innovation. But then one can expand the innovation concept, and make it much larger” (Personal communication, 3 April, 2012).
5 Analysis

In this chapter, I first analyze AB Electrolux and after this the socio-technical perspective is analysed. Later on, E-gate is the topic followed by knowledge management and organisational culture. In the end, I look at leadership and innovation. The different chapters end with a conclusion called “important aspects” including questions and statements that needs to be considered by organisations and which is a part of the result.

5.1 AB Electrolux

In AB Electrolux one of the most important things is to create innovation, in the product development process (PDP). Local PDP variations are currently used and there is an effort in having a unified global PDP. Due to the fact, that PDP involves a wide range of activities, I will only look at a specific part of the PDP. This part is called product development, which is much dependent on inputs from phase two and forward, which are illustrated in the empirical part.

Important issues according to the respondents are the identification of consumer opportunities. These involve the initiation of consumer opportunities and to understand customer needs, identifying trends and market possibilities. The next steps ahead and which further is stated by the respondents are that the following steps, like primary development and concept development plays an important part to the input of product development.

Rafinejad (2007) writes that product development often is a hard work and has not managed to give results thereby frustration will also become an object, although that there still is a desire to triumph. If this is the case in any organisation, then employees should be aware of that failure often is due to that; product development efforts miss out in doing the whole job. And by doing the whole job, Rafinejad means:

- “Having a business strategy that is communicated to the development team.
- Having an integrated technology/market/value chain strategy that is understood by development team members
- Having a capable team that understands the market priorities
- Executing the development project with agility and real-time responsiveness to the changing conditions of the marketplace and the consumer” (Rafinejad, 2007, pp.2-3).

At the moment in AB Electrolux, there are some issues when it comes to the PDP and if PDP is not fast enough? Already today knowledge and skills are available to solve such issues. This can be solved if they use E-gate and the innovation triangle, which are available to the staff. It also seems like that the newly implemented social features will have a positive impact on the pace of PDP. But these features are not fully recognized, across the whole organisation. Because of this, the pace will not start to increase.

If AB Electrolux is going to incorporate the above statements, doing the whole job and take advantage of social media technology features. Then I think, this matter is much about giving it more time and let it grow. Employees should be given the opportunity to be acquainted in how to best communicate through E-gate and become more comfortable. Later on PDP will become more innovative and faster.
5.2 Socio-technical Perspective

Recently, AB Electrolux has incorporated new social media technology on their intranet “E-gate”. Important and relevant to know in this case, is that designs are dependent on the developer’s objectives and that this is related to that all are socio-technical systems, where a joint mixture of technical system and social system best could meet the objectives. When socio-technical areas are implied, then this matter is much about the two parts socio and technical, where the former are constituted by people and society. The latter are concerning machines and technology. Much of the socio-technical concept concerns interdependencies, organisational environment and self regulation (Emery, 1959 cited in Trist 1997). This is also recognized by the participants during interviews.

As earlier stated by Trist (1997) both individuals and their work-roles usually change values and expectations, which will have an impact on organisational design. And changes in technology also changes values, cognitive structures, life-styles and habitats, both in regard of the context and organisational deviations. This is one thing and which for the moment is happening at AB Electrolux, due to that new social media technology recently has been implemented. The respondents are well aware of that there are different roles, which plays an important part, contributing to the wholeness of the organisation.

But a formal role structure is hard to map and define against a task structure; in this case could a group responsibility close the gap. Another issue debated in the literature is that socio-technical is much about the interrelatedness between the social- and technical factors, with two principles, interaction of technical- and social factors, and joint optimization, of either the source or the technical side. Socio-technical term is also often just a description of a mixture of people and technology, which are striving to design organisations, displaying open system properties in an effort to improve management of environmental complexity, new technology and competition (Walker, et al., 2009).

There is one way to become more transparent and go towards being a socio-technical organisation and this is being initiated in AB Electrolux for the moment, through visualization of product development on E-gate. Product development is consumer-driven and is about the definitions of function, properties, color and shape. Thus, consumer insight will make a significant impact on the brand in all aspects. From the point when customers are interested in the product and to purchasing of it, and also when the product is ready for disposal. Initiatives have been made in development, through global cross-border units trying to establish faster and more efficient processes, in areas such as product development, design and marketing.

Socio-technical design could in some ways be seen as a philosophy of organisational change, including ten principles derived from Cherns (Lehaney, 2004). These principles could be used by AB Electrolux, during the enhancement of their intranet E-gate or in any other organisational change of the PDP.

Further, Cherns (2000) claims that engineers must consider the social systems and its survival and also be thinking of subsystems, in this case are the subsystems about Parsons’s (1951) four subsystems – “attainment of the goals of the organisation - adaptation to the environment - integration of the activities of the people in the organisation, including their solution of conflict, whether task-based, organisation-based or interpersonally-based - providing for the continued occupation of the essential roles through recruitment and socialization” (Cherns, 2000, pp.2-4).

These four subsystems could be a valuable addition to innovation and further enhance performance, becoming a more socio-technical organisation. Through this, one
could integrate a functional mixture of people and technology, which strives to become design organisations and which are displaying open system properties. This addition could be used to improve management of environmental complexity, competition or a new technology (Walker, et al., 2009).

Task performance, will evidently be providing problems and so will supervision etcetera. This raises the question, should an enterprise be an open or closed system in the relation to its environment? Most often enterprises are using open systems and are growing through internal evolution, keeping a steady state of throughputs, regardless of environmental changes. In an effort when trying to keep stability, by using an open system, enterprises could only achieve this through the illumination of external and internal environmental connections and their relations.

AB Electrolux is today working towards a unified product development process. In order to enhance innovation, AB Electrolux has developed the Innovation Triangle, emphasizing on collaboration among Designer, R&D and Marketing. The objective is to develop more successful products with a shared vision, accelerating the pace of PDP through leveraging synergies at global- and regional levels. This could create new roles where workers are not acting alone but to a certain extent in a role feeling with “dependency, subordination, self-worth, trust, isolation etc” (Emery, 1959, p.13). This kind of work is important, according to Trist and Bamforth (1951 cited in Trist, 1997, p.13) who: “Have postulated that the demands created by a technological system are met first by 'bringing into existence a work relation- ship structure’.

In this case, E-gate is the solution which enables collaboration and self service to employees from everywhere. But this will bring forth some challenges, changing users, leadership and workplace behavior: “Beyond a certain point the solution of one kind of problem depends upon solving some of the others” (Emery, 1959, p.1). Trist and Bamforth (1951 cited in Trist, 1997, p.13) write: “Occupational roles express the relationship between a production process and the social organisation of the group. In one direction they are related to tasks which are related to each other; in the other, to people who are also related to each other” (Trist and Bamforth, 1951 cited in Trist, 1997, p.13). In socio-technical systems, organisation relies in a much higher grade on that a resource is receiving an output and its material resources. The core in this is related to nonhuman system and a human system and their cooperative. Further, one could also see a mix of these both forms, which might cause conflicts. In assistance of these mixtures and to meet objectives, managing challenges, E-gate has Episerver an editorial tool, enabling dissemination of information or to spread news to a wider group of people, this with a customized layout and with static pages used to share policies and with guidelines with easy access.

Another tool is IBM connections, and anyone can start a team site with this. Further are Sharepoint and Team Sites really good when working with data in a certain way, as a backend system or just to work with data. Sharepoint is today used in a number of projects, with closed groups, where you can share documents. It corresponds with team sites on the E-gate. In both scientific purposes, practical issues or among individuals, there is a need to isolate problems in areas like; “design of machinery for human convenience, job evaluation, selection, incentive schemes, primary group organisation, supervision and management organisation” (Emery, 1959, p.1).

When it comes to communities which also are useful features, this requires fairly strong commitments and which cannot be public, but where everyone could create a community. Organisational activities namely need physical support, where people are willing to contribute to the development of services or throughputs of material (Von
Bertalanffy, 1950 cited in Emery, 1959). Communities are much usefully when trying to create a dialogue between managers.

Further stated, is that there is a need to maintain directional communication and outreach activities, which are based on that you know who people are and what we know. Otherwise, it will be quite stochastic according to respondents. In this subject Trist (1997) has written about new technologies where one can create new societal possibilities, like primary work systems in which a broad level could be reached. The mode of the elaboration may be constructive or destructive. According to Maries and Scarlat (2011), there are some key characteristic of communities of practice, which are important to have the knowledge about. Those key characteristics are mentioned in the theoretical part.

Other issues are that manpower is not sufficient when managing communities; it is difficult to manage these by oneself the respondent claims. But when traffic grows it might be self-powered. But to get this to start running it requires that you are there every single second of the day. Important in this matter is that when analyzing parts of an enterprise, then one should first think about the technical issues, followed by work relationship structure and its occupational roles, in order to find out how it can get better (Emery, 1959).

There is both technical- and social perspectives that have to be regarded. When seen from the technical side, we have E-gate which is supporting collaboration among all involved parts. And on the other hand, there are social factors related to the global culture, which is gathered on E-gate. In my opinion, can applications, such as social media technology assist understandings of cultural issues and enhance organisational collective cultures. In order to manage product development and innovation, the innovation triangle has been created. And in this case, there is also global visualization of the product development available, which further supports the innovation triangle. And thus, can be regarded as a socio-technical solution to innovation. But according to Cherns (2000), one needs to maintain goals and further also adapt to the environment through integrating peoples’ activities in the organisation. And also think about recruitment and socialization.

Emery (1959 cited in Trist, 1997), says that technology is transferring input to output and this is important when it comes to self-regulating properties of an enterprise. Technology constitutes the boundaries of the social system and mediates the organisational ends to the external environment. But it is hard to define the circumstances in which an open system performs a steady state, especially, if organisations do not take the mediating boundaries in consideration, in which the system works (Von Bertalanffy, 1950 cited in Emery, 1959). This perspective of innovation creations can be seen, where E-gate and its technological factors are creating such boundaries, in which employees are working and where the awareness of boundaries will create and enhance collaboration, with the external environment. Things of importance in this case are nonhuman system and a human system and their cooperative, in order to establish a good throughput.

Another question is whether E-gate should be an open system? I agree with Emery (1959), who writes; in an effort of keeping stability using an open system, enterprises could only achieve this through the illumination of external and internal environmental connections and their relations. Other related issues in perception of the socio-technical perspective are roles, groups, tasks and relations that have to be managed, in regard of E-gate, in order to be able to contribute to innovation, where friendliness could lead to better collaboration amongst members of the E-gate.
I also think that E-gate could be thought as Trist (1997) primary work systems. By recognizing problems in knowledge transferring and its characteristics, one could improve the current position when designing “socio-technical systems that can support the effective sharing of, and learning from other’s experience” (Newell, 2005, p.277). Size is an eminent issue in work relationship structures, and it is related to tasks. This has been reflected by semi-ideological human relations movement, which proposes friendliness factor as critical in the group cohesiveness and proposes a work of friendship theory (Emery, 1959). If organisations are using this theory, maybe organisations then could close the gap between work task and relationship structure?

**Important Aspects**

- There are two perspectives that have to be accounted for, both the technical and social perspective.
- Social and technological parts should work as a whole.
- Make efforts in trying to embrace global culture, promoting open systems.
- External and internal environment will have an impact on social and technical issues.
- Bring clarity to work relationship, structures and roles.
- Close the gap in work relationship structures, related to tasks.
- Be aware of boundaries, both social and technological.
- Think about the designing of socio-technical systems.
- A problem often has a connective problem.
- A joint mixture of technical system and social system could best meet objectives.
- Consider external and internal environmental connections and their relations.
- Should we use open or closed systems in the organisation?

**5.3 E-gate**

**E-gate Perception**

According to the respondents is E-gate first and foremost an information carrier of news, policies and guidelines, where some respondents use it to bring out information, about processes and tools. Further I think that AB Electrolux, as I see it, is an Enterprise 2.0, especially, since they have implemented social media technology on E-gate. Evidently, E-gate is there to serve the business needs and a specific process need, according to the respondents.

In aspects seen from a technological point of view are to have online discussions in forums where one is able to go global with processes. Thus, someone could do the background and make the process visible to all with access. But, there are also some features, probably missing on the E-gate and which could enhance its performance. Or just make it somewhat better. E-gate is constituted by a variety of models, which have been implemented. And in consideration of Corso, Martini and Pesolis models, is E-gate both models of Clubs, Family and Teams. But today, I cannot see the presence of an Agorae model. E-gate is not open to external players and in order to break virtual workspace boundaries, it should be open. But the tools represented today on E-gate and how E-gate is working now, internal barriers could be tear down and supported. Such as the elimination of geographical challenges, which would support collaboration and make knowledge transfer possible, or give the opportunities to create new initiatives of effectiveness, strategic thinking and organisational flexibility.
Today respondents say that E-gate do not support employees’ role; it is more like a base layer. And much of E-gate is in personal folders and in closed communities or within closed team-environments. Maries and Scarlat (2011) state that tacit knowledge which lies in individual experiences, and explicit knowledge, are often managed in organisation by the use of social networking, capturing interactions, trying to evolve the community based knowledge. Through this a number of organisational communities of practice have been developed. These communities are working as a tool and are the core of collective learning and collective intelligence, enhancing the sharing and development of knowledge, across boundaries.

Another E-gate issue and which is represented by the respondents who say that it is hard to be open, because the industry and nature determinates how open someone could be. But think of what (O’Rielly, 2006 cited in Mc Affe 2009, pp.45-46) wrote: “Build applications that harness network effects to get better the more people use them”. Or like Maier (2004), who proposes that organisations need to establish a way to use human knowledge, in order to take care of their knowledge, and by sharing it through a knowledge management system. Then technologies in Web 2.0 are also vital in order to connect employees and let them work and share knowledge, in a better way. In such a case, organisations could benefit from knowledge sharing, especially among employees with special skills and to utilize information available and refining it. Web 2.0 has also the potential to create network effects, which could influence the productive supremacy in a group, to improve both quality and the quantity of the work (Matuszak, 2007). Using and taking advantage of metadata are also one of the great features of Web 2.0. Web 2.0 technology also enables organisations to build databases, capture metadata and take care of its surrounding ecosystem (O’Reilly and Battelle, 2009).

Further issues, when referring to technological aspects are that an online platform should be intuitive and easy enough for anyone to learn and to share. But today on E-gate there is little open source information and there are lots of internal firewalls. E-gate is a rather open channel, so materials in this case, almost need to be public. It is quite easy for information, shared on E-gate to slip out of the company. So with this in mind organisations should think on what Matuszak (2007) says, and who claims that: “Proponents of Web 2.0 say it is only by permitting greater transparency, and by fostering greater collaboration and knowledge sharing across organisational boundaries, that companies can reap the benefits of tomorrow’s emerging technologies”

Another barrier is that feedback into E-gate from leaders is missing and this could be due to that the schedule is tight, and there are lots of other things to do, during a workday. It could also be difficult to have some impact on how E-gate is developed says the respondents. Further issues are that it is difficult to find some links on E-gate, and that it is difficult to find back to previous stages, visited. Maybe they need to learn and understand developers’ thoughts when this was built, one respondent says. The main barriers are at the end people’s attention and that time is limited. And, that the IT platform is developed well, but although employees’ are only using certain features. Further insinuations are motivations which could come from people’s needs and which should be based on our internal researches and also our own observations. On an individual level it is to create the needs, opportunities and to put people in the right context or by using education and information more. But another one says, training is of course useful, but only training cannot create you the opportunities, you must also have some initiatives, which you know people feel like; oh I need to use this feature. Another issue in this area is to make people participate and that applications on E-gate have to be relevant to working tasks, both in a team and on an individual level. By context motivate participation at the individual level this is vital when it comes to participation.
But, according to a respondent there is no time and a specific time of the day to check E-gate blogs or communities cannot be cut out because this time is not available. Another answer is, that today we do not motivate more than that we inform about the usefulness and tell people to update their profile and check if they have the right managers available in their system. This sometimes and occasionally could lead to inspire others.

**E-gate Processes**

Soon crowd sourcing open innovation platform will be initiated and also innovation jam, a tool or a campaign which is developed by IBM, in order to engage the employees with top management, in a strategic agenda through a 48 hour online discussion session. This is supportive by E-gate, which is the main platform. Global jam is also a topic, where all employees are invited to join a two-three day activity, secession. In which the CEO and several executives down the organisation, cooperates with the moderators and puts a force on a two-three days extensive work. These help can make so that people feel like, this is important and then might people get the feeling of being noticed since they have been involved in these activities.

There are also thoughts about external partners, and if they could come to join in these online discussion brain storm sessions in the future? Now there are no methods and approaches, taking care of the collective intelligence. One example of doing this is crowd sourcing that integrates web-based collective intelligence. In order to grasp the collective intelligence there are some building blocks, “found in several combinations by phenomena of web-based collective intelligence” (Ickler, 2010, p.29).

A respondent says that there is a need for a tool that supports you before you go into the wall so to speak. A tool is not just enough there is also a need for a good process. Product development is built up virtually in the E-gate. Wishes from E-gates side are that they hope E-gate will influence on this process. This will make E-gate more important to people who works in this process, through promotion of transparency and also for others who have access to E-gate. The question is should AB Electrolux work with innovative questions, directly in E-gate? Or should this be taken on another platform that is better connected to the system's backend?

Further one respondent says, to get people to use E-gate and cooperate with each other than some content is needed; that I think is what not just necessary for Electrolux, but will also give some satisfaction to the workers. Not just their own knowledge to be shared but also to be able to seek new knowledge. In this case one could think of: “A key competency of the Web 2.0 era is discovering implied metadata and then building a database to capture that metadata and/or foster an ecosystem around it” (O'Reilly and Battelle, 2009, p.6). And, where Web 2.0 is giving rise to new phenomena enabling collective intelligence, through employees who participates more actively, in the organisational evolution. One example of doing this is crowd sourcing. Crowd sourcing integrates web-based collective intelligence. And in order to grasp the collective intelligence, some important building blocks are needed, which includes several different combinations of phenomena of web-based collective intelligence (Ickler, 2010). If AB Electrolux is going to use crowd sourcing, then will Ickler’s building blocks mentioned in the literature be a help to increase the usage and take advantage of the collective intelligence.
**E-gate Social Media**

I asked if social applications are a part of their job etcetera. I was given the information that it has to be relevant to work. Social applications when used are very powerful tools. It is a natural way to work together, through casual conversation and interpersonal dialogue. This is the most powerful way to learn and exchange knowledge, rather than in formal forums and official meetings. Some challenges that organisations will meet are to maximize the benefits from using Web 2.0 technologies, whilst protecting the organisation and its assets (Matuszak, 2007).

Another one says we need to look at this from different perspectives. One is actually what we are creating. It must be relevant, and if it is relevant? Why do people not use it? Another one says I have not used it. I have just put up my profile; I am not used to use these new social technological functions. But there comes a point when it will be relevant. This is when a sufficient number of people are using it. Further information I receive is that social technology is important when it comes to knowledge sharing and it is a part of it. But this is not enough. All officials must use it if it should be effective.

I asked can social functions affect you positively so you can learn about others? When I was asking this, I got answers like. Can be so, has not seen it concretely, but background information may assist you to make contact and exchange information with others. Cross cultural differences might also be improved further through social media, according to the respondents. “Organisational culture in general greatly influences how an organisation handles knowledge” (Maier, 2004, p.189).

In an organisational culture there are some areas which most likely will have a great impact on knowledge management, such as (Baskerville and Dulipovici, 2006):

- Organisational culture
- Cultural values
- Power, control and trust

**E-gate Conclusions**

The opinion about E-gate is that it is used to share information, in order to enhance innovation and establishing a culture which supports innovation and goes more towards an Agorae model. A lot of areas are closed to specific users and this is of course necessary, because all information cannot be shared. A need is to know that knowledge could be spread and shared across the organisation. Barriers have to be known and taken care of. Further, the rules have to be supportive by the E-gate. And that community of practice is set up within E-gate this could be used as a tool to improve knowledge sharing. Also some form of enhanced feedback is needed, so E-gate can be an improved communication channel.

New processes are to be implemented, and in this case it is crowd sourcing, which could be a step in the right direction. Good complements to the social applications are work. But, first of all social applications must be connected to work. And people need to get used to these new features on E-gate, and where cultural aspect at the same time is a concern. Some statements made in literature are that open source interests are increasingly evolving in the academic world, where theories of open innovation are luring organisations. Despite this, not many organisations have an understandable (if any) policy; dealing with the social media they have adopted (Ferguson, 2011). One important thing is that organisations should have policies to support the above mentioned issues.
Important Aspects

- Think on user involvement in development of E-gate, to enhance user interfaces.
- Web 2.0 technologies should create transparency and enable knowledge transfer.
- What key players could we in the future invite to E-gate?
- What Web 2.0 technological are barriers and how should we manage them?
- Should our intranet be the place for new processes, in regard of innovation?
- Knowledge could be transferred, stored and examined through Web 2.0 technologies and metadata.
- Collective intelligence should be considered.
- How will social media affect organisational culture and vice verse?
- Make sure the user knows about policies, guidelines or other factors that might be barriers to innovation and knowledge sharing.

5.4 Knowledge Management

It seems like in general that the respondents do not have a problem in sharing knowledge. Huysman and De Wit (2002) are debating knowledge sharing and those taking part in this activity and where it could be found and shared. Huysman and De Wit are also stating that there are three critical aspects, in this matter. First mentioned is knowledge management. And second, how one can to learn from knowledge sharing. The third activity is about ICT and how it could support knowledge sharing. An important matter is if knowledge sharing is to be institutionalized, and be a part of the daily routines, this depends on the three statements above. Knowledge flow is defined by the network itself and should be assisted with social networking analysis. Both when it comes to the external- and internal environment of the organisation, as well as across boundaries. This in an effort to visualize knowledge flows, analyzing it and optimize it, this will increase the efficiency of knowledge flows and management (Leistner, 2010).

Respondents say that technological systems must be sufficiently user-friendly and where technology must work. When it comes to co-workers, there is a need for them to feel that they get something out it and also let them know it – this is what I am working with – and that procedures used today is connected to it. This kind of social- or community platform is supposed actually to replace, or to come up with new routines, which lets you work smarter. And if one should enhance the use of technology? Then AB Electrolux should take notice of Leistner (2010) and his work. Leistner states that technology itself will not do a success. People should instead be involved and this is crucial. Such issues are also multidimensional if organisations are trying to motivate users using such technology. And in a large scale one should think of:

- Motivation
- Reward and Recognition
- Roles
- Scaling
- Support

Other statements about knowledge and E-gate are that the respondents do not use this today, to share knowledge, but the idea about E-gate is that it should be working like this. But to share knowledge, then one must first know that knowledge comes in various forms of knowledge. And that knowledge sometimes is difficult if not impossible to share. This is especially true when it comes to social media. Two types of knowledge exist – explicit and tacit, where explicit could be expressed in numbers or words, shared
through data, scientific formulae, specifications, manuals and like readily transmitted among individuals, both formally and systematically. When the respondents are interviewed, then I get knowledgeable about that they do understand the difference between these types of knowledge. But the knowledge about that there are four types of knowledge and how they influencing and interact with each other is another issue.

Tacit knowledge is highly personal, hard to formalize, difficult to communicate and share. When it comes to knowledge, the interaction between tacit and explicit knowledge are crucial. And one must know that they are complementing each other, in a knowledge creation process. This emergent interaction is a process among individuals and is interacting in a social process, not confined within the person itself. In this case there are four different modes of conversation like in the SECI model (Nonaka, Konno and Toyana, 2001).

According to Newell (2005, p.282): “There are three key characteristics that appear to be important – that knowledge is distributed, that knowledge is ambiguous, and that knowledge is potentially disruptive”. And according to Nonaka, Konno and Toyana (2001) are the interaction between explicit- and tacit knowledge crucial, when it comes to knowledge. Further, one must know that they are complementing each other, in the knowledge creation process. In this case, the knowledge-conversion process is important.

Another aspect is ba which is about shared time and space for upcoming relationships, among individuals and groups, in order to create knowledge. Ba is integrated knowledge collected from some areas. These create a platform for a transcendental perspective, which emerges to integrate and creates knowledge, where interaction is considered as an important factor. There are four types of ba: originating, dialoguing, systematizing and exercising. One must understand the characteristics in ba, and how they interact and facilitate knowledge creation. In this case, the knowledge-conversion process is important.

The identification of people is another barrier and also the ability to identify people. Not only with their names and phone numbers, but also who they are? And how they look like? Who is their boss? Who is their assistant? So it is simple things but also what is their expertise and this in a multidimensional area, to handle such information. Then the next thing to do is to put them in a relation to each other. A respondent’s sees motivation as a part of the job, to help and share with other colleagues. Further statements by another respondent, is that there is no motivation stimuli yet. Other motivators could be to have the profile updated, or just promoting competence could be counted as motivators.

“Knowledge transfer implies that each individual/group/organisational unit need not learn from scratch but can rather learn from the experiences of others. Kolb’s (1984) learning cycle is a useful framework through which to explore this” (Kolb, 1984 cited in Newell, 2005, p.276). So in this case is a community a good example where employees could learn from it. Other social applications could also enhance knowledge sharing and knowledge transfer. Or as Newell (2005, p.277) claims, one should learn from “actual experiences (concrete experience) and experiment and practice to find out what works best (active experimentation)”. 

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Knowledge Transfer and Knowledge Sharing

Organisational culture and the people belonging to it, and the promotion of knowledge sharing are some of the crucial matters, which an organisation will meet, when they are trying to increase knowledge sharing.

Other important aspects are the capability of sharing knowledge. And also “relationship between the source and the recipient, the form and location of the knowledge, the recipient’s learning predisposition, and the broader environment in which the sharing occurs” (Cummings, 2003).

Huysman and De Wit consider that there are three critical aspects of this matter. First is to managing knowledge and second how to learn from knowledge sharing. The third activity is about ICT, and how knowledge sharing could be supported. If knowledge sharing is going to be institutionalized and become a part of the daily routine, then it will be dependent on the former three statements. If these are not given the proper attention, then will organisations end up with, an obstruction of knowledge sharing. This could cause traps in areas such as ICT, individual learning and management. But if we could understand the difficulties in transferring knowledge and things that are characteristics, then designs of information systems could be significantly improved and better suit knowledge transfer. In this case could explicit knowledge be available to others (Newell, 2005).

Implied by knowledge transfer is that each individual/group/organisational unit, do not need to learn from scratch. But instead they can learn from others experience. In this case is Kolb’s learning cycle also a useful framework. Furthermore in this case, there are four other processes that one must accomplish in order to learn. Things mentioned are concrete experience, observational reflection, abstract conceptualization and active experimentation, where one will start at the concrete experience.

Important Aspects

• Technology alone is not the solution, people involved is the most important.
• Motivate users, to use technology.
• There are different types of knowledge.
• How is knowledge creation working?
• Think about the dynamic interaction, involving explicit and tacit knowledge.
• Perform social networking analysis, of external- and internal environment.
• Remember the building blocks of web based collective intelligence, during crowd sourcing.
• Communities of practice could be used in an intranet, to take care of problems.
• Knowledge is dynamic and is created through social interaction.
• There is a multidimensional issue, when it comes to knowledge.
• All knowledge could not be taken for granted and just be used.
• Information communication tools are important and shoud support the needs.
• How is our valuable knowledge transferred and shared?

5.5 Organisational Culture

According to Bang (1988), there are three factors influencing on culture and how it evolves: People, ambient determinants and the culture development process. Organisational culture manifest e.g., in artifacts, language, symbols, norms, behavior, heroes, stories, myths, legends, beliefs, values, attitudes, ethical codes and basic assumptions, including organisational history (Drumm, 1991 cited in Maier, 2004).
When it comes to AB Electrolux and its organisational culture, it is described as a strong culture, “it is our Electrolux”. Another respondent describes it as Scandinavian, with shared responsibility and built on trust. The greater distance from its core, (Stockholm) and to some extent the regional centers (Charlotte, Sao Paulo / Curitiba, Brussels, Singapore) then there is a smaller piece of the Scandinavian heritages.

One respondent says, in regard of sharing, a lot of people are willing to do this. “Organisational culture in general greatly influences how an organisation handles knowledge” (Maier, 2004, p.189). The culture is similar in Sweden, but when it comes to other countries there are differences. Cultural issues, could in some cases cause problems when working together, due to geographical distances. In every geographical region, different kinds of cultures could evolve, when there is an effort of bringing joint works from these geographical areas, conflicts could arise (Bang, 1988).

In this case, one respondent says if you could gain knowledge about a person through social applications that are vital then is E-gate a support. Strong decentralization is also used to describe the culture, with a high level of entrepreneur-ship, with respect to colleagues, with environments which are very informal. When it comes to barriers, language is mentioned as an issue and if E-gate can overcome these language barriers it would be great. Maybe it could be done through a multiple language option?

Other relevant issues are that one needs more time to learn E-gate, and that it is an international company also makes it more difficult and there are lots of other differences that could be seen as barriers.

Another respondent says. Sharing and collaboration are related to the corporate culture and why we do need to share? So, if it is in the core of organisational values, then AB Electrolux should actually have people willing to share. This should be a natural thing to do. Policy can actually allow this to happen, instead of being incentivized. The respondent says: “But before now. I do not see we are; you know people willing to share are based on certain incentives. But, mostly based from, needs of your work, and that you share, within a controlled environment” (Personal communication, 3 April, 2012). If future organisations will adapt and benefit from utilizing knowledge network teams, in order to take care of the creative power, which is sustained from project communities and open source. Then most of it must be provided through individuals' own passion of working together in a global society.

AB Electrolux is trying to become more transparent, through visualizations in E-gate, and also by promoting collaboration amongst others. Collaboration and development among members within teams will be the sustaining factor which contributes to better performance. Collective intelligence includes collective perception and discernment, collective imagination and intuition, collective memory and collaborative learning where self organizing learning communities like communities of practice are communities which share knowledge (Maries and Scarlat, 2011).

AB Electrolux is a global company with a large number of employees with competencies, knowledge and skills, which could be transferred through E-gate. But it could be difficult, due to different cultures and languages, to take advantages of the collective intelligence.

A respondent says AB Electrolux tries to streamline the sharing. And this is done somewhat centrally, global and regional through award ceremonies. There is an effort in trying to share this globally. This through building good case practices. In order to make better use of the collective intelligence, AB Electrolux should also consider communities of practice, which Maries and Scarlat are mentioning. According to Bang (1988) there are three factors influencing cultures and how these evolve: People, ambient determinants and culture development process. Incentives in organisations
could also do the non believers of technological changes, to become interested in the use of new technologies and to contribute with their experience in digital form, through either blogging, wikis or answering boards (McAfee, 2009).

**Important Aspects**

- People are the most valuable asset in organisations.
- Culture development processes must be considered by management.
- Remember to create a good cultural atmosphere.
- Let the employees know that they are an important part of the organisation.
- Cultural development evolves during quite a long period of time.
- One does not need to learn from the beginning, learn from others.
- Innovative collaboration should be promoted.
- Community of practice could solve problems.
- Information communication tools could enhance collaboration and strengthen the organisational culture.
- Embrace knowledge sharing and knowledge transfer, globally.

5.6 **Leadership**

If AB Electrolux aims at collaborative innovation, then leaders should start working in this way. The management gurus James Kouzes and Barry Posner wrote: “Leadership is a relationship between those who aspire to lead and those who choose to follow” (Kouzes and Posner, 2007 cited in Li, 2010, p.9). Business foundations and relationship are vital aspects of leadership, when it comes to social technology. But, how should one then think? According to Li, think of some relationship of your own life, and how do you manage this relationship?

Today, leaders do not have a frequent dialogue on the E-gate. The importance of having good people working with the intranet is maybe not fully understood in AB Electrolux. But, if leaders could have time for it then it must to be a part of the communication strategy. There cannot be a self-purpose; it must be like, now I will bring my message in a particular area through this channel. “In the sense, ICT can be an enabler of innovation and change” (Corso, Martini and Pesoli, 2009, p.206). To get employees to share, leaders plays an important role and which is fundamental.

But first of all, one should gain knowledge about E-gate and how it works. According to the respondents short video tutorials will be posted. These will show how the intranet works. This is important because when someone is starting to use a new feature, then managers must set a good example, showing how things are working. It is important to send the right signals about what tools to use, when someone is starting a blog or how to be active in a community. This if AB Electrolux should be able to pursue a certain type of discussion, and at the same time show examples in how this could be done.

Leaders can demonstrate this by leading by example, leading to better collaboration. Li (2010) writes in regard of social technology; organisations must think of business foundations and that a relationship is built on relationships. And this can be found among both individual customers and the organisation, and also among employees and partners. Often time is limited and resources are not sufficient and technology is challenging. And top management is not often sharing their information. This might be due to that they think this information is confidential, or that the team does not need to know about it. Another reason could be that the team is not considered to be mature enough. Or, it might be a reason when trying to retain one’s own power. But: “Nothing
is more harmful to doing the whole job of developing a commercially successful new product than withholding information” (Rafinejad, 2007, p.3). ICT tools have to reconstruct a social reality with its communicational flows, interpersonal relationship, and maybe supplement this through emphasizing on openness and collaboration. AB Electrolux has been using openness and collaboration during a period of time and leaders are well aware of that collaboration is a success factor to gain organisational success. Further leaders have ICT available in communication and they also have frequent dialogues through E-gate. Thus, a wide crowd from different countries can fast and efficiently be reached.

ICT is seen as the social fabric of knowledge and relations. Another important role in this perspective are played by Knowledge Workplace technologies. These are constituted by web-based applications, which an employee could gain access through, as the intranet in the organisation he or she works for is providing an opportunity to use. “Enabling organisational survival one is required to continuously innovate, both in areas of products, services and business models” (Magnusson and Martini, 2008 cited in Corso, Martini and Pesoli, 2009, p.206).

Even if AB Electrolux is not as efficient as they could be it is not about that they lack vital ICT in order to capture and take care of knowledge in a better way. But, instead they should use the ICT more efficient in order to take care of and capture knowledge from customers, competitors and technologies. Further, organisations must also take care of changes and competence reconfiguration.

“A new IS generation that integrates work environment, personal relation and collaboration, can play a key role in innovation as it can” Corso, Martini and Pesoli, 2009, p.206). This kind of integration is partially happening in AB Electrolux and a technical solution to take care of this is at hand. But what about the social issues are these a problem? Leaders can then play important roles and where the use of ICT can act as an ice breaker. ICT can be an enabler of change and innovation (Corso, Martini and Pesoli, 2009). In the role of IS one could say that the user, has increasingly governed this part. In the future many challenges are ahead and which management has to deal with. When going forth ICT should be a help to managers, taking care of organisational evolution. “Technological intervention into knowledge work can be useful, but high-performing knowledge workers say that they get the most of their valuable information from other people in their social networks” (Davenport, 2005, p.162).

### Important Aspects

- Openness and the will to share could support individuals to follow.
- Knowledge about the intranet and how different features are working should be known and learned by users.
- Time set aside to use and learn about the intranet E-gate.
- Relationship and a frequent dialogue on E-gate.

### 5.7 Innovation

Innovation inside AB Electrolux is very similar to what literature describes. And it is clear how innovation should be reached. But in order to create innovation then one should know that there is more than one single aspect. AB Electrolux solutions to innovations are among others, the innovation triangle, which includes Design, Marketing and R&D, which in cooperation should promote innovation. When thinking about innovation, the OSLO manual makes the difference, among four types of
innovation. First are product innovations, process innovations, marketing innovations, and last are organisational innovations (OECD, 2005). In a European Commission Green Paper, one can read that; the innovative firm has an amount of characteristic features and that these can be divided into two major categories, strategic skills and organisational skills. Other activities of innovation, covering areas such as invention, implementation, breakthroughs and improvements requires a wide range of other skills. But, it seems like that the respondents have enough knowledge about innovations and that knowledge in some cases is different. In AB Electrolux has new innovation initiatives been taken to enhance future innovations.

Plans today, are also to use open innovation, in E-gate as a complementary technology. In regard of technologies, Ferguson (2011) supposes, that open source gives a capability to support an innovative economy. Open source in AB Electrolux could promote and support innovation to products and processes. Regarding the main area to enhance PDP, the first thoughts will often be around product innovation. But open innovation might also lead to process innovation. In order to perform open innovation, one should be aware of Chesbrough (2003 cited in Ferguson, 2011, p.237) that introduced open innovation – “due to disruptive technology”, which is about going outside harvesting, and “develop or out-license innovative ideas and intellectual property”, beyond organisational boundaries.

Companies are eager when trying to retain capabilities and traditionally this is developed internally. But open innovation is a far better, less risky and faster way, compared to in-house development. This is concerning AB Electrolux, due to the fact that they have some plans for open innovation. Open innovation could lead to new fresh knowledge and to new aspects, to become more innovative. But in order for this to happen the objective is to diversify in terms of technology and/or markets. From this AB Electrolux can gain benefits, like new and larger bases of ideas, technologies, flexibility and responsiveness, at lower costs. Further, it will create a sense of urgency, letting internal innovators either use or lose in-house available knowledge and technologies.

In case of activities, you then should look at scientific, organisational, financial, technological and commercial steps, which are intended to or lead to that an innovation later is implemented. In policy discussions and research on innovation, highlights are often about the magnitude of taking a broad perspective, when looking at innovation. R&D plays an important part in the innovation process, but much of the innovation activities do not come from R&D. Instead, there are highly skilled workers who are interacting with others, outside the organisation and this seems to be highly important, in the learning and exploiting of knowledge (OECD, 2005).

If AB Electrolux will go on and incorporate their plans with open innovation, then they could also start to gain benefits from the external environment. In order to make the most of it when communicating innovation then organisational assets, such as social capital and strategic planning are of importance (Ferguson, 2011). In the aspect of involved parties then a huge number of actors are taking part more than ever before, during innovation. These actors come from a wide variety and are forming a unity of people, derived from different domains, such as civil society and philanthropic organisations. Thus policies should be to promote this and be modified and aligned with the environment, in order to prepare an extensive variety of actors, which could carry out innovative actions and benefit from its results (OECD, 2000).

Further the most valuable is to get people to be active. One needs to be aware of that, according to Huberman et al. (2009 cited in Ferguson, 2011, p.235) who writes: “People are often willing to forego financial gain to obtain notice”. Today AB
Electrolux has no incentives when it comes to generate innovation. Ferguson says that people prefer to be taken notice off. Is this the truth? AB Electrolux could then do reportages about people involved in innovation, and post it on the front page of E-gate.

Other encouragement of audiences in social media, involves participators to disclose freely and such a manner could also affect others to do the same. Not only when it comes to the personal part. This also includes public expectations on corporate entities, and that leaders are sharing knowledge and information. Even in regard of the negative. This should also be reflected in how they are doing business, which further could lead to transparency, which AB Electrolux would like to incorporate. This is as I see it a good idea. This will improve the current innovation pace and further have a positive effect on cultural issues.

Further there is also a need for a social media administrator who could manage functionalities like communication, collaboration, cooperation and connection (Cook, 2008 cited in Ferguson, 2011). Intangible assets are widely invested in across firms, in a number of OECD countries. These investments made are similar in research and development (R&D), software, databases and skills, as it is in physical capital, equivalent to equipment or structures. AB Electrolux has made investments in new technology, to enhance collaboration and communication. This has recently been done.

But there are still some issues to improve. One of them is policies which are not specifically clear or communicated amongst the employees. If policies are to be effective, then must promotion of innovation in the way be reflected how innovation happens today. A transformation of an invention to become an innovation needs a lot of extra activities, like organisational change, firm-level training, testing, marketing and design.

Science is one of the most important parts of innovation but as it is, it encompasses a lot more than just R&D. Another factor, which has an impact on this, is innovation and which seldom occurs in isolation. Innovation is a very interactive, multidisciplinary process and progressively involves more collaboration by a rising of various networks of stakeholders, institutions and users. The facts are that users and stakeholders are important when it comes to innovation, and that this calls for the creation of an innovative atmosphere. OECD constitute that human capital is of the essence of innovation, where humans need to be empowered in order for innovation to take place. Empowerment could as I believe it, be derived from a socio-technical perspective, which should be incorporated in organisations. Further needs are broad encompassing relevant education and development of widespread skills, which could complement formal education. In organisations, innovation openness differs, because of factors like the importance of technology for the organisation, or the current strategy of the firm or industrial characteristics in the industry (OECD, 2005).

If innovation is a multidisciplinary process, then one might also think about how we could measure a potential innovation. Literature and respondents are saying that innovation is best measured through economical factors. “A new IS generation that integrates work environment, personal relation and collaboration, can play a key role in innovation” (Corso, Martini and Pesoli, 2009, p.206).

Other aspects of importance are to invite external sources, to enhance innovation. This is also a part, which AB Electrolux has thought about. Communication is becoming more relevant today, when an intranet is using Web 2.0 technologies, which enables people to work more closely, cutting boundaries. Communication is also a must to create and inspire motivation in organisations, strengthening social connections among leaders/coworkers and group members (Kaufmann and Kaufmann, 1995). Goals could be communicated and customers could be closely involved in questions,
regarding product development and thereby promoting innovation. Innovation activities in enterprises have a cause, where an effort is to adjust the objectives, related to products, markets, efficiency, quality or the capacity to learn and to implement changes.

When organisations are engaged in innovation, the activities must be identified through economic objectives, in terms of products, markets and number of goals along with its significant impact in reach. This should also be related to all innovation activities which in general could create more relevant objectivity (OECD, 2005).

One thing that also has to be mentioned, is that innovative activities of an enterprise, depends in part on the variety and structure of its links to sources of information, knowledge, technologies, practices, human and financial resources. Linkages should be of sources of knowledge and technology (OECD, 2005). Further is that a linkage could depend on the market, or it could be in the nature of an enterprise, which is the dependant factor (Dierkes, 2003 cited in OECD, 2005).

In short the respondents are explaining their view of innovation as follows:

• Innovation is seen as continues efforts, to develop and find new solutions and make it better next time.
• Innovation is that we define it more from a consumer point of view.
• To create something new that adds value to some objective function, this could be product innovations, process innovations, but it must have a direction or a goal. Just because it is something new it is not an innovation.
• Better cost, better consumer offer, or taking us towards an objective function.
• Purpose or an aim to be able to provide a better customer value, lowering costs, and shorten lead times or whatever is one's goals.
• Located close to creativity and is close to the great mass creativity. Like crowd sourcing, open innovation and how we together can develop improvements or further refine something, that makes a product or service better in the end. But at the same time it is connected to a process or structure so that one can capitalize it correctly and also manage it. For example when a patent is involved.
• Innovation is all about products so to speak. Innovation is important because one can see that there is a direct correlation between innovation and margin, the more innovation one has the more margins one gets.
• Then there comes a cost, this is the balance between how much one is spending on innovation, versus how much one will get back, which should be found within the company and all companies have different balance points.

Important Aspects

• What kind of innovation is best for the organisation?
• What strategic skills and organisational skills do we have or need?
• What strategic skills and organisational skills do we need to enhance?
• Innovation strategy should be in line with organisational objectives.
• There must be a common view of what innovation is, in the enterprise.
• What kinds of assets do the organisation needs to enhance, in innovation both when it comes to the technical and social aspects?
• Customers are important and innovation must bring value to them or the organisation.
• Should we incorporate open innovation and open source and if so how?
• What scientific, organisational, financial, technological and commercial kind of activities will inspire or lead to that the innovation later is implemented?
• Policy discussions about innovation, and to communicate this through the entire organisation is important.
• All innovation does not come from in-house R&D most of it comes from external sources.
• Economic objectives are vital, costs must be considered in any innovation.
• Empowerment of people.
• Information communication technology (ICT).
• Does the innovation fulfill the needs, purpose or goal set up by the organisation?
• Involve people, to make the best innovations.
• Manage new innovations correctly to involve patents etcetera.
• Consider innovative activities in enterprises, which depend in part on the variety and structure, of its links to sources.
• Surveys on E-gate, in order to confirm and measure the innovative atmosphere.
• One should measure implemented innovations through economical objectives.
In this chapter I debate about my findings and results I have come to find during my studies.

Innovation is the key factor in this research and where a Socio-technical Perspective is used. When it comes to the result of the research questions, there are some important issues, which AB Electrolux and other organisations must take into regard and which are related to specific areas.

I would like to state that Web 2.0 social media technology can improve knowledge sharing and knowledge transfer, promoting and increasing the pace of innovation. Further cultural aspects will also have an impact and support knowledge sharing, knowledge transfer in an intranet and enhance innovation. To what extent these areas will make an impact is much due to their relationship. To further improve knowledge about their relationship a quantitative study is in order.

I will in this part elaborate how to improve knowledge sharing and knowledge transfer, by the use of Web 2.0 social media technology in an intranet to enhance and increasing the pace of innovation. In addition my intentions are to explain more about cultural aspects that support knowledge sharing, knowledge transfer in an intranet and enhance innovation. Further, I will present a model based on the results this because an innovative atmosphere is not static, but instead it is more dynamic as I would like to see it. The most suitable way of illustrating the result, in how to create an innovative atmosphere is by creating a model which can be used in different organisations. In the creation of an innovative atmosphere, a lot of factors play an important role. One very important thing is that all organisations have different cultures with employees working together, and who are located in different countries.

6.1 Relationship

Sometimes relationships among different areas are not taken for granted. And if organisations do understand that there is a relationship between different areas they might miss out on becoming a competitive organisation. Organisations need to know that each area will influence on innovation but also be aware of that not all areas will have the same effect on innovation. This is a difficult issue, but all areas do influence on each other creating a whole and are important to innovation. Another issue is that all organisations are unique and have various policies, guidelines, values and cultures etcetera.

First of all i would like to state that if you combine all the theoretical and empirical material and if organisations strive to become more innovative, a multi dimensional thinking is then needed. So why is this needed? Each employee has a different-background, assumptions, knowledge and worldview and so on, as we can see in literature and from the different answerers made by the respondents. Organisations have their values, cultures, sub cultures and their own way of working and solving problems. Further we also have to apply information systems and information technology and which plays an important part to innovation. These areas sometimes causes problems and sometimes it don not. But, to maintain a stable organisation where innovations are seen as an important part to the organisation, then multidimensional thinking is important and where the relationship has to be known and widespread throughout the organisation.
6.2 Main areas analysed in this research

To take notice of, the Socio-technical Perspective is used foremost as a perspective, which organisations could use to enhance innovation.

**Socio-technical Perspective – Important aspects:**

A1 There are two perspectives that have to be accounted for, both the technical and social perspective.
A2 Social and technological parts should work as a whole.
A3 Make efforts in trying to embrace global culture, promoting open systems.
A4 External and internal environment will have an impact on social and technical issues.
A5 Bring clarity to work relationship, structures and roles.
A6 Close the gap in work relationship structures, related to tasks.
A7 Be aware of boundaries, both social and technological.
A8 Think about the designing of socio-technical systems.
A9 A problem often has a connective problem.
A10 A joint mixture of technical system and social system could best meet objectives.
A11 Consider external and internal environmental connections and their relations.
A12 Should we use open or closed systems in the organisation?

**E-gate – Important Aspects:**

B1 Think on user involvement in development of E-gate, to enhance user interfaces.
B2 Web 2.0 technologies should create transparency and enable knowledge transfer.
B3 What key players could we in the future invite to E-gate?
B4 What Web 2.0 technological are barriers and how should we manage them?
B5 Should our intranet be the place for new processes, in regard of innovation?
B6 Knowledge could be transferred, stored and examined through Web 2.0 technologies and metadata.
B7 Collective intelligence should be considered.
B8 How will social media affect organisational culture and vice verse?
Make sure the user knows about policies, guidelines or other factors that might be barriers to innovation and knowledge sharing.

**Knowledge Management – Important Aspects**

C1 Technology alone is not the solution, people involved is the most important.
C2 Motivate users, to use technology.
C3 There are different types of knowledge.
C4 How is knowledge creation working?
C5 Think about the dynamic interaction, involving explicit and tacit knowledge.
C6 Perform social networking analysis, of external- and internal environment.
C7 Remember the building blocks of web based collective intelligence, during crowd sourcing.
C8 Communities of practice could be used in an intranet, to take care of problems.
C9 Knowledge is dynamic and is created through social interaction.
C10 There is a multidimensional issue, when it comes to knowledge.
C11 All knowledge could not be taken for granted and just be used.
C12 Information communication tools are important and should support the needs.
C13 How is our valuable knowledge transferred and shared?

**Organisational Culture – Important Aspects**

D1 People are the most valuable asset in organisations.
D2 Culture development processes must be considered by management.
D3 Remember to create a good cultural atmosphere.
D4 Let the employees know that they are an important part of the organisation.
D5 Cultural development evolves during quite a long period of time.
D6 One does not need to learn from the beginning, learn from others.
D7 Innovative collaboration should be promoted.
D8 Community of practice could solve problems.
D9 Information communication tools could enhance collaboration and strengthen the organisational culture.
D10 Embrace knowledge sharing and knowledge transfer, globally.

**Leadership – Important Aspects**

E1 Openness and the will to share could support individuals to follow.
E2 Knowledge about the intranet and how different features are working should be known and learned by users.
E3 Time set aside to use and learn about the intranet E-gate.
E4 Relationship and a frequent dialogue on E-gate.

**Innovation – Important aspects**

F1 What kind of innovation is best for the organisation?
F2 What strategic skills and organisational skills do we have or need?
F3 What strategic skills and organisational skills do we need to enhance?
F4 Innovation strategy should be in line with organisational objectives.
F5 There must be a common view of what innovation is, in the enterprise.
F6 What kinds of assets do the organisation needs to enhance in innovation both when it comes to the technical and social aspects?
Customers are important and innovation must bring value to them or the organisation.

Should we incorporate open innovation and open source and if so how?

What scientific, organisational, financial, technological and commercial kind of activities will inspire or lead to that the innovation later is implemented?

Policy discussions about innovation, and to communicate this through the entire organisation is important.

All innovation does not come from in-house R&D most of it comes from external sources.

Economic objectives are vital, costs must be considered in any innovation.

Empowerment of people.

Information communication technology (ICT).

Does the innovation fulfill the needs, purpose or goal set up by the organisation?

Involve people, to make the best innovations.

Manage new innovations correctly to involve patents etcetera.

Consider innovative activities in enterprises, which depend in part on the variety and structure, of its links to sources.

Surveys on E-gate, in order to confirm and measure the innovative atmosphere.

One should measure implemented innovations through economical objectives.

6.2.1 Important Aspects and the Research Questions

In my analysis which is a part of this thesis and which consists of so called “Important aspects” in the end of each area. An explanation in accordance to each research question and relevance of the “Important aspects” are as follows to better illuminate the readers about my findings. As earlier stated that different areas have an impact on each other and due to this I will in the following part only concentrate on what research questions the “Important aspects” as I see it will make the most impact, although I am aware of that some of them could contribute to more than one of the research questions.

Research Question 1 (RQ1):
• How could Web 2.0 social media technology, improve knowledge sharing and knowledge transfer, promoting and increasing the pace of innovation?

Research Question 2 (RQ2):
• What cultural aspects, could have an impact and support knowledge sharing, knowledge transfer in an intranet and enhance innovation?

Research Question 3 (RQ3):
• How could organisations create an innovative atmosphere?
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<th>Table 6.1 Important aspects matrix (own picture)</th>
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<td>RQ 1</td>
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<td><strong>Socio-technical Perspective</strong></td>
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<td><strong>E-gate</strong></td>
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<td><strong>Knowledge Management</strong></td>
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<td><strong>Organisational Culture</strong></td>
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<td><strong>Leadership</strong></td>
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<td><strong>Innovation</strong></td>
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**Web 2.0 Social Media Technology and Cultural Aspects**

Innovation and knowledge management are not easy tasks to manage inside AB Electrolux but, Web 2.0 social media technologies usage can perform well in those areas as I see it. And in an organisation good leadership will support innovation. Innovation sometimes emphasizes on specific issues in different areas, in an organisation, which could be considered as important. When it comes to innovation embracing culture is then an important factor for organisational success.

Web 2.0 social media technology could also in many aspects increase the pace of innovation, due to a number of reasons. First of all communication will be better and employees could also reach a larger number of other employees, just by using any of the many features available through Web 2.0 social media technology. To gain better response and involvement from the end users, then should organisation and those responsible for the implementation of social media technology include listening to users and others affected when an organisation introduces a new technology. Interfaces in such cases could be more user-friendly. And when employees are participating in development, will they get a sense of being more important to the organisation.

Further will the transparency become more obvious and work could be performed more efficiently. Users of E-gate will further get more vital information and improve their knowledge about the organisation. Organisations should also take advantage of the collective intelligence, using previous technologies, which have been discussed earlier. In regard of social features, will people in a much smarter way be able to more easily and effectively provide information to others. Acquaintance with other employees will be easier. Sharing- and transfer of knowledge will also become more efficient. New innovation will maybe then be the outcome, because of the use of Web 2.0 social media technologies available on E-gate.

Knowledge could further be transferred, stored and examined through Web 2.0 technologies and metadata. But, although knowledge can be transferred and stored, the users must first start to use technologies available, to be able to share their knowledge. In this matter, one could try to motivate users. Leaders can contribute so that this will
happen. Further enhancement of innovation could happen when Web 2.0 social media technologies are involved and is used by employees. This will give users the opportunity to interact, with each other, where several participants could take part in a conversation and thus innovation will increase. This also opens up for communities of practice and the ability to involve external contributors who could enhance the pace of innovation. Open innovation is also an important part, which could have a positive effect on innovation.

AB Electrolux must decide if E-gate is the place for innovation to be created. Or if it just should be a social community and a place for communication to take place and enhance cultural aspects? This is not the way to proceed according to my opinion. If you have technologies use it to its maximum. Inspire people to use Web 2.0 social media technology; later on knowledge will be shared, transferred and innovation will start to grow. Cultural issues are important in all organisations. To enhance certain aspects in this area one could add the "important aspects", which is mentioned in the analyse part of this study.

6.3 An Innovative Atmosphere Through “The Pipeline Model”

During analysis I have created as I see it, valuable information in point form in the end of each part of the analysis. In order to create an innovative atmosphere, one could incorporate “important aspects” from the analysis in this study.

These informative conclusions I have found and together with my results from previous mentioned research questions are forming and constituting the backbone in the development of the Pipeline Model. In order to create a more innovative atmosphere in AB Electrolux, my conclusions are that there is a need to create a system which is more open and to invite external key players such as competitors, who could contribute and enhance innovations. In this case, one should also think in terms of how we can involve customers to participate in the ongoing conversations, on E-gate. But, AB Electrolux first of all must start to integrate current users of E-gate in a larger extent. And then further on, enhance the use of social media technology. Important external key players could later also be involved.

Another important issue today is that it seems like that there are no policies clear in how to use E-gate. This might be confusing for the users. This might also prevent the creation of an innovative atmosphere. Further is that today are users and their working roles not concretely visualized on E-gate. And if a user has an important issue to solve, then it could be difficult for the user knowing who to contact. There is assistance in this matter, due to the fact that people can start a community or just communicate with others; but over time and which is already starting to happen is that the volume of information from the communities will be overwhelming and impossible to take advantage of and use effectively. If not precautions are taken to curb this problem.

There are some questions, which have to be answered for by the organisation before they start to use the Pipe Line model.

**Questions**

1. What is innovation to us?
2. Do we need innovation?
3. In what area should we innovate?
4. What kind of innovation is needed?
5. Do we possess all things needed to innovate, like proper IS/IT and human resources?
6. What are the causes, and effects, of the innovation?
7. Are innovation strategies aligned with business/organisational objectives?

8. How should we later evaluate and measure the effects, of innovation?
9. How should we implement our innovation?
10. How should we do to follow up on the innovation?

Figure 6.1 Pipeline model (own creation, 2012)

This model can also be developed, to be a management system of innovation, in order to support decision making and to keep track of issues that are vital, to pertain an innovative atmosphere. The model in this case is related to product innovation, but organisations can also add additional models, from other organisational areas, and further, add connecting pipelines in those areas. The model can also be used together with important aspects derived from the socio-technical part of the analysis. It could also be used to further enhance the creation of an innovative atmosphere along with a socio-technical perspective. Organisations can of course also use the important aspects from the other areas of the thesis and thus hopefully also add further improvements to the organisational atmosphere.

**Pipeline:** This is about the flow of information and activities, which is needed in order to create an innovative atmosphere according to the organisation. Every pipeline also contains a set of evaluated questions which are important and chosen by the organisation. Information and activities should then be categorized and prioritized, in order to reach desired organisational goals and to solve the questions set up by the
organisation. Then the organisation must also later adjust the flows, of information/activities which could lead to an improved innovative atmosphere. The organisation must also decide about the directional flow of information. In what direction it should go? And if it just needs to go in one direction? Or maybe the flow must go in both directions? In the following, I provide guidance, which is related to information and what to consider in the formulation of questions to each environment, of the Pipeline Model.

**Guidelines**

**External innovation (EI):** What external information do we need and who should be involved?

**Internal innovation (II):** How should we take care of the information inside the organisation, should all information be shared and how?

**Subsidiary innovation (SI):** Could we use information from any of our subsidiaries?

**Core organisation:** What issues are vital to the organisation and which could in some way, have an effect on the desired atmosphere?

**R&D:** Information, should or could it be shared across the organisation?

**Special Ops:** Regarding important and valuable information, connected to R&D and which is vulnerable. What information could be shared in order for us to get a more innovative atmosphere?
7 Discussion

In this chapter I am discussing the result. And in the end of this part are an historical perspective and some implications for further research.

When individuals come together and co-operating through inter-organisational intranets, then communicational boundaries are reduced. People should be working together as a whole and utilize the intranet, and in such a case would innovations maybe become more than an accidental contribution.

Adopting and implementing Web 2.0 social media technologies could be difficult, not just in terms of technology. But uttermost is that both socio-technical and cultural problems could arise and give birth to intricate encounters.

Further one must enlighten about knowledge sharing and knowledge transfer when vitalizing individual creation, supporting team spirit and create widespread organisational creativity through management. This could enable the adaption of new technological challenges, which in the future will be raised due to critical “symphonies” of environmental pressures, from customers, stakeholders, competitors and etcetera.

I would like to claim, that there is a need for new research reports and this is also supported by Riedl and Betz (2012, p.1) who state that: “Despite the fact that social software is now commonly provided for intra-company usage, this usage is below expectations in many cases”. And I think that in the future, sharing and transfer of knowledge will become a problematic deviance.

7.1 Historical Perspectives and Further Studies

As Descartes wrote, “In his Discourse on Method (1637)”, (Descartes, 1637 cited in Watson, 2002, p.8), “people do in fact have spirits or souls or minds. And only people with minds have desires and can do things. Bodies have no desires no, power. They move only because their gears interact, so to speak, when they bump into one another” (Descartes, 1641 cited in Watson, 2002, p.10).

In an analogical retrospective of Descartes statements, and if we consider that a mind is the organisation and its employees. Where individuals are shaping the environment to a whole, creating a holistic system and the non-human systems are the body representing organisational technology. Then, if organisations in such a case and its employees have a desire to fulfill customer needs, with the help of the non-human system, the body, and which in itself is dependent on human activity. Then there is a need for an improved purposefully integration, among employees and the non-human systems. This should inspire continuing research in contemporary organisations which emphasize a socio-technical perspective, along with cultural issues.

To further gain more knowledge about problems and solutions that could appear, when organisations are adapting the use of Web 2.0. Then might social media research also lead to new insights about difficulties and how to best address, such issues. When organisations get an insight in areas influenced and which is related, to the above topics then they will be able to generate more profitable and better business solutions to problems that might occur during everyday work. Not just in product development, but also in other important business areas. So new informative, quantitative and/or qualitative researches in the above areas, would most certainly lead to better understandings of how both, intra- and inter-organisations can be prepared for futuristically unpredicted problems.

Other areas of interest might be the use of smart-phones integrated in organisational intranets, with an appreciation of mobile use. Or it could be other research issues that
could be solved, through the use of Fred Emery’s Nine Step Model “Analytical Model for Socio-Technical Systems”. When applying this analytical model, researchers could then be able to evaluate the use of Web 2.0 technologies in an intranet and thus be able to enhance the use of Web 2.0 technologies.
References


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Oral sources

Zhen Li – Innovation Marketing Manager Market Driven Innovation

Johan Skåntorp – Program Director

Ralf Larsson - Director Employee Online Engagement and Development Corporate Communications

Stefan Roxenby - Product Development Process Director

Sofia Dahl - Employee and Industrial Relations & Resourcing and Recruitment Specialist
Appendix

Appendix – 1 Interview Guide

Questions below includes follow up questions.

AB Electrolux & Electrolux Laundry Systems Sweden AB

English version

1. Could you briefly tell me a little about yourself and your professional role?
2. How do you use the intranet applications and how does it support your work?
3. What is innovation to you?
4. What is important to create new innovations and innovative thinking?
5. What are the prerequisite to share your knowledge (technology / employees)?
6. Can social applications / features improve collaboration and lead to increased knowledge sharing?
7. How can the social elements and leaders' contribution to the strengthening of the culture and develop the organisation?
8. Are there any incentive / motivation to help share the inherent knowledge (tacit or explicit knowledge) on E-gate?
9. How do you see the role of leaders in the development of the intranet?
10. How does the process influence E-gate?
11. How does the E-gate influence the process?
12. Are there currently any feedback that illuminates your participation on the intranet? (Can you see how you influence others by your participation)?
13. Global product development involves different cultures, how can the E-gate be used to support and create collaboration between these different cultures?
14. How could we motivate participation on intranet at an individual level, and just not looking at teams?
15. How would you describe your organisation's culture?
16. How does culture affect you in regard of knowledge sharing and participation?
17. Does the lack of anonymity affect you in the public areas of the E-gate, in regard of knowledge sharing and participation?
Swedish version

1. Kan du kort berätta lite om dig själv samt din yrkesroll?
2. Hur använder du intranätet vilka applikationer stödjer detta arbete?
3. Vad är innovation för dig?
4. Vad är viktigt för att skapa nya innovationer och innovativt tänkande?
5. Vad är förutsättningarna för att dela med sig av sin kunskap
   (teknologi/medarbetare)?
6. Kan sociala applikationer/funktioner förbättra samarbete och leda till ökad
   kunskapsdelning?
7. Hur kan de sociala delarna och ledarnas bidrag de stärka kulturen och utveckla
   organisationen?
8. Finns det några incitament/motivation som bidrar till att dela med sig av
   inneboende kunskap (tacit eller explicit kunskap) på intranätet?
9. Hur ser du på ledarnas roll i utvecklingen av intranätet?
10. Hur påverkar processen E-gate?
11. Hur påverkar E-gate processen?
12. Finns det idag någon återkoppling som synliggör ditt deltagande på intranät (kan
     du se hur du påverkar andra genom ditt deltagande)?
13. Global produktutveckling med olika kulturer hur kan E-gate användas för att
    stödja och skapa en gemenskap mellan dessa olika kulturer?
14. Hur motiverar ni deltagandet på intranät på individnivå och inte bara för ett
    team?
15. Hur skulle du vilja beskriva er organisations kultur?
16. Hur påverkar kulturen Dig vid kunskapsdelning och deltagande?
17. Påverkar avsaknaden av anonymitet Dig i de publika delarna på E-gate
    kunskapsdelning och deltagande?
Appendix – 2 Web 2.0 Meme Map (O'Reilly, 2005)

Web 2.0 Meme Map. (O'Reilly, 2005)