



**SCHOOL OF ECONOMICS
AND MANAGEMENT**
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Commitment to Innovation

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Abstract

Title:	Commitment to Innovation
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Authors:	Ronny Huynh & Renjie Han
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Five Key Words:	Innovation Management, Innovation Climate, Leadership, Knowledge Management and Commitment.
Thesis Purpose:	Our purpose is, through a case study on a high- technological mobile phone company, to see what and how different factors foster the employees' commitment towards innovation.
Methodology:	We have chosen to conduct a qualitative grounded analysis. This approach is heavily used with transcripts of in-depth interviews. Since our research involves in-depth analysis, this is suitable for us in our research.
Theoretical Perspective:	For the theoretical foundation for analyzing the empirical data we have made use of theories within Innovation, Knowledge Management and commitment. In the innovation section we have the intention to present for our reader a brief overview of the concept and how it is derived from knowledge Management. Finally, Commitment theories lie as foundation for our analysis of empirical material.
Empirical Foundation:	We have made a sample of telecommunication companies that we were interested to conduct research upon. Transcripts based on in-depth interviews with one of the companies, AEISO became our empirical foundation.
Conclusion:	Through our empirical material with help we have made the conclusion that community, management/Leadership, Personal Development and Recognition as a reward, are factors that affect employees commitment towards innovation.

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- Chapter 1 Introduction -

In this chapter we will introduce our readers to our report by describing a brief background of the subject of matter followed by the problem discussion which tells more specific about the aim of this thesis. Followed by this, a focused purpose will be presented which functions as the read thread through the whole research. To facilitate the reading as well as maximising the understanding of this research, research questions have been developed to function as a guideline to the action taken by us. The Delimitation part will tell the reader specifically of what is being focused as well as what has been ignored. The chapter ends with a definition section.

1.1 Background

Ever since the tamed fire by the first Homo erectus (upright man) dated half a million years before B.C, innovation has been a chain of movements that have shaped the ways things are today. The art of printing has increased the level of literacy amongst a large population. The Mobile phone which are first seen as high technological apparatus used as an intercommunication tool between soldiers in a war field are nowadays commonly used by millions of people around the world. The breakthrough of internet usage has opened a new dimension for people to communicate with each other with no regards of time and space.

Through globalization which makes the whole world function, more or less as a gigantic market, leads to freeing up the market for competition. Companies are no longer seeking to increase profit domestically but also stretch beyond borders. Inexpensive telecommunications and computer technologies have made it possible to work seamlessly across borders - opening the door to outsourcing strategies, research collaborations, manufacturing alliances, new forms of networking and the need to rethink the way you organize your business, adapting to the “New Way” of doing business (Infeed Search, 2008).

What brings companies into a common standpoint today is that they are all very focused upon, not only to maintain their profit maximizing strategies but also finding new ways of staying ahead in the highly competitive market. This is further emphasized by Utterback (1994) who states that whenever the competitiveness hinges on the ability to take on and develop, or adapt new technologies in products, services and processes, understanding the dynamic nature of industrial innovation and change is essential for survival and success. Authors such as Bessant, Pavitt and Tidd (2001) claim that the ability to be able to make use of innovation to improve the company processes or to differentiate their products and services will lead to the firm outperforming their competitors, measured in terms of market share, profitability, growth or market capitalization.

1.2 Presenting the Problem

“The management of innovation is inherently difficult and risky, most new technologies fail to be translated into products and services, and most new products and services are not commercial successes. In short, innovation can enhance competitiveness, but it requires a different set of management knowledge and skills from those of everyday business administration” (Bessant et al. 2005 p. 1).

The above states clearly that the premise of an innovative organization lies in the fact that there is a need for changing the way of managing knowledge within a company, something that is beyond regular way of doing administrative tasks. Due to the complexity nature of innovative firms, organizational settings are highly important for employees to commit themselves to innovative tasks. Since innovative firms’ core competences lie in their ability to innovate, being good at it means competitive advantage.

Although the above can be seen as a taken for granted concept that many firms are striving or claiming to possess, the most crucial part is to get the employees voluntarily involved in innovating. According to Starkey (1996) the key to the innovation process is personal commitment, the employees’ sense of identity with the enterprise and its mission. This is in line with Dissel, Harner, Janssen, Lugt, Moultrie and Nilsson (2007) who claim that one way for organizations to become more innovative is to capitalize on their employees’ ability to innovate. The authors stress the importance of addressing the influence of leaders on employee’s innovative behaviors. This has shown to be a challenge.

Although innovation is increasingly seen as a powerful concept, a way of securing competitive advantage and also an approach to defend strategic positions, there is absolutely no means of to a guaranteed success due to the uncertain nature of innovation. This is further supported by Bessant et al. (2005) who claims that there is no clear best practice to make the employees genuinely committed to innovate, what seems to be a success in one occasion may well be a failure in another occasion. The author also states that it is a matter of management issue, that is to say the managers’ task to make choices about what resources to use, their disposition as well as how these are coordinated in order to foster the innovation spirit in the organization. For instance, Hennessey and Amabile (1998) claim that understanding of individual strengths and weaknesses and working relationships that are founded upon sensitivity and trust have been shown to enhance creativity and problem-solving capability. On the other hand Bessant et al. (2005) claim that real success to innovation lies in being able to repeat the trick of success, in other words the process consistently so that success, whilst not ever guaranteed, is more likely to happen. This is to say to try to minimize the portion of chance and instead manage sources that make people committed to be more innovative.

Hartog and Jong (2007) state that to initiate innovations, employees can generate ideas by engaging in behaviors to explore opportunities identify performance gaps or produce solutions for problems. Since the opportunities are based upon incongruities and discontinuities, that is to say things are not

fit to a secured known pattern, unfulfilled need of the customers or indications that need can be changed in the future, in the actual implementation phase the employee can play a crucial role in showing application oriented behavior. But, in order to be able to initiate this mindset, the manager needs to play its role right. Starkey (1996), claims that formal organizational arrangements provide structures, systems and procedures which direct and motivate behaviors to innovate. Also the facts that if companies are willing to let its employees freely explore new paths of doing things, this risk taking spirit is a premise to fostering innovation.

Hartog and Jong (2007) research on employees' innovative behavior has shown that managers can have an effect on their innovative behavior. The research which is based upon a survey done by over 250 respondents provides an inventory of leader behavior that affects the employees' innovative behavior. By creating a "positive" atmosphere, the employees' are more likely to get motivated to commit themselves to innovate.

1.3 Research Questions

- What are the factors that affect people's commitment to innovate?
- What is the managers' role to make people committed to innovation?
- What factors do employees think are important to foster commitment towards innovation?

1.4 The Research Purpose

Our purpose is, through a case study on a high-technological mobile phone company, to see what and how different factors foster the employees' commitment towards innovation.

1.5 Target Groups

This Thesis targets:

- Companies, which activities are highly innovation based. They face the challenge of keeping their employees motivated to innovate or have the intention to enforce the innovation behavior amongst them.
- Researchers and managers who are interested in the interplay between individuals and the working environmental circumstances and see what are the outcomes of this based on a real case study.
- The host company interviewed to give them a third party perspective of the current situation of the firms intention of creating a motivating working environment for its employees.
- Students who have the interest to gain an insight of a real case study of a company's intention of fostering the employees' commitment for innovation. This creates a more concrete way of enforcing the theories taught in class.
- Finally, this thesis could also be meant to make a contribution of the existing research within the field of stimulating people to innovate.

1.6 Delimitations

Due to time limit we have limited our research to only focus upon the crucial department for innovation in the company, namely the R&D department. Since the research is about employees' commitment to innovation, this has made us shape our theoretical framework to only focus on this aspect.

1.7 Definitions

Due to the fact that we have delimited our research to only focus upon the R&D department, we would also want to make our readers aware of the fact that whenever we talk about employees in the empirical material as well as in the analysis chapter, we automatically refer to the engineers that work within the R&D department.

Knowledge Intensive Firm (KIF) - KIFs are organizations often competing in their respective sectors based on their ability to solve complex problems and provide solutions for clients

1.8 Thesis Outline

Chapter 1 - Introduction

This Chapter starts with a brief introduction to the topic innovation. It continues with a discussion around the problem per se. Furthermore we will present the research questions which work as the red thread through the thesis followed by a purpose of our research.

Chapter 2 – Methodology

In the methodology section, we will shortly discuss the methodological reasoning of what methods have been chosen to conduct the research as well as why these are chosen. Validity aspects will also be covered in order to ensure the credibility of the thesis. We will end the chapter with criticizing our research approach.

Chapter 3 – Theoretical Framework

The purpose of this thesis derived from the problem discussion has led us to large amount of literatures. Chapter 3 consists of the relevant theories for our specific purpose. In this chapter, we will bring up the possible aspects of looking at a certain problem per se, followed by arguments of why they are chosen and also why these are relevant for our research. The compiled theories will work as our framework to analyze the empirical data.

Chapter 4 -5 Empirical findings and analysis

Based on the theories from the Theoretical framework that we created in chapter 3, the intention of chapter 4 -5 is to use them to collect the empirical data and analyze them.

Chapter 6 – Conclusions and advice for further studies

The findings derived from the analysis of empirical data will be discussed. This chapter will end with a brief discussion of our contribution and what we suggest for further studies.

- Chapter 2 Method -

In this chapter we will present the method chosen and how this facilitates us with fulfilling our research purpose. Firstly, we will give the reader a brief discussion of the method chosen. Thereafter the section moves on to the data collection section whereas a brief presentation of how the empirical data was collected and what method was used, as well as sources. Finally, we are going to have a discussion section around how the retrieved data is going to be analyzed. This chapter will end up with an outline on our approach followed by some criticism.

2.1 Chosen Methods

2.1.1 Deductive vs. Inductive approach of doing research

There are two ways to approach research, and that is either through deduction or induction. According to Bryman and Bell (2003) the former implies that theory is something that guides and influences the collection and analysis of data. This simply means that questions are answered based upon an existing theoretical base. The latter approach is to view theory as something that occurs after the collection and analysis of some or all the data associated with a project. Since this master thesis is a final project in the managing people, knowledge and change program, we have already been exposed to a lot of materials that has given us a pre-understanding of the subject of matter. Due to this specific reason, we are aware of that we have adopted the deductive way of doing a research. However there is no clear distinction of which approach to use because they both co-exist in a research, but not necessarily in the same proportions. After have gained access to empirical data, we will try to see if there is anything that could contribute to the already existing theoretical base. This method, to go back and forward between theory and data, is called to be iterative (Bryman & Bell, 2003).

2.1.2 What Research Strategy Chosen

There are two strategies to choose between when conducting a research; one can either adopt a quantitative or qualitative approach. Hard data constitutes the fundamental pillar in a quantitative way of conducting research and it is characterized by numbers. With help of these numbers, the researcher can create an overview over a huge load of materials, that is to say, it creates the premise to summarize and keep an overview. The qualitative approach on the other hand has the interest to get into the explorative world during the research process. With this approach, the researcher will try to connect the retrieved data with theories and to create an overview and understanding of the problem per se.

There has always been an issue of whether these two approaches of conducting research can be separated. According to Svenning (1999), the qualitative approach has, hence mentioned above, an interest of exploring the world and constantly asking the question “how?” meanwhile the quantitative approach which derives it’s the result from numbers instead try to answer the question

“how many?”. Alvesson and Sköldbberg (2000) claim that the choice between quantitative and qualitative methods cannot be made in the abstract, but must be related to the particular research problem and research object.

Since our purpose in this thesis is to have an in-depth look at how different factors affect the employees’ commitment to innovate, we have chosen the qualitative way of conducting research since this approach is more suitable for our research. Bryman and Bell (2003) stress that unlike objects of the natural sciences, the objects of the social sciences (people) are capable of attributing meaning to their environment and due to this particular reason, people doing a qualitative research will have the tendency to look at events and the social world through the eyes of the people that they study. The fact that Innovation is a concept that is derived from the concept of knowledge management, which nature is intrinsically ambiguous and multifaceted, there are many ways of studying it and results can vary from time to time. We want to have an in depth understanding of how and why things appear as they do and not to generalize a certain phenomenon, therefore the quantitative research method is excluded. Alvesson and Sköldbberg (2000) highlight the fact that since people carry their own frame of reference during their research, this will inevitably mean that the researcher will make their interpretations in accordance to them. Therefore, this is why interpretations are always relative and not absolute.

Hence mentioned earlier, since we are interested in “how” and “why” in our research, we have chosen qualitative as our approach. According to Yin (1994), generally when these questions are posed, the preferred strategy to use is to conduct case studies, because of the investigators low control over events and also the fact that the focus is on a contemporary phenomenon within some real-life contexts.

2.1.3 Case Study

Case Study is originally derived from life histories. In the life histories one gets to scrutinize the thoughts, life and feelings of individuals. Today, the concept of case study does not only apply to people, but the concept can also be applicable to study organizations, processes and events. Case study is an intensive study that could stretch from a shorter to a longer period of time. It is all based upon the researcher’s collection of relevant materials in which he can find in one or several cases. Because all materials are organized around a or a couple of cases, the method is suitable to be used when a researcher wants to create a picture over a lapse of time and the importance of details to changes (Svenning, 1999). Considering the time frame given to write the master thesis, we have chosen to only focus upon one company to conduct our research upon. According to Bryman and Bell (2003), a case study can be either on a single organization, a single location, a person or a single event. Since we are interested in to see how different factors affect the commitment of the employees towards innovation in the R&D department in a company, we have chosen to do a case research of a single location.

2.2 Data Collection

Easterby-Smith, Thorpe & Lowe (2004) claim that the primary methods used to collect data for a qualitative way of conducting research include: Interviews, observation and diary methods. These methods used in order to gain the insights into people and situation that the researchers require. Before getting into a more detailed ground, let us first describe shortly of what data has been collected and how we did it, we have divided them into secondary and primary data.

2.2.1 Secondary Data

As mentioned earlier, we are interested in conducting interviews to collect our empirical data for future analysis. However, in order to maximize the credibility, we think there is a need to have basic knowledge about the industry background, company culture, structure, and policies and so on before the interview. Therefore Internet resources such as Google and Wikipedia are used to collect basic information of the industry background. We have used Google Search to retrieve secondary data and used it to enforce the information we got from our research company.

Since innovation is a popular topic amongst students at Lund University, there are a lot of secondary data about innovation from previous studies. These can be retrieved using the Elin database from the School of Economics. Another source that we found useful when retrieving our data was to look back on what has been written by previous thesis authors within innovation. By searching in the thesis database, we found several theses that were applicable in our research. Yet another important source is to make use of professionals within the field of our study. Since Innovation is a common concept in the Master program managing knowledge, people and change, our professors from previous courses have shown to be very helpful to give us valuable advice of where to start in our thesis process as well as giving us feedback about the quality of it.

On one hand, the research company's homepage will provide us with general information of the company from their own perspective. On the other hand, information retrieved from Google Search can supplement opinions from others' perspectives outside of the company. Hearing voices from both sides makes us eligible to have an objective overview of the company. Some topics from courses that we have taken during our master studies are highly related to our subject, hence mentioned earlier, and the course literatures, articles, quest lectures and lectures provide us with information and data needed for our writing.

In overall when retrieving data from the different sources mentioned above, we have to have focus in mind, this to reduce the countless hits that are not useful for the research per se. So in order to create this focus, we have tried to look up the information with use of key words. Keywords that we have used are: *Innovation Management, Innovation Climate, Leadership, Knowledge Management and commitment*. Of course, hence the name secondary data, these information are not developed to individual thesis rather we will adjust it to our own research and combine it with the primary data retrieved, which in our case is through interview.

2.2.2 Conducting Interviews

According to Yin (1994) interview is one of the most important sources to use when retrieving information for a case study. In overall when conducting interviews, we have three possibilities to choose between, they are through: E-mail, phone or face-to-face interview. We have chosen to conduct face-to-face interviews with people from AEISO (Company chosen, further described in section 2.2.3) because this method is superior over the others. Easterby-Smith et al. (2004) highlights the positive side of Conducting interviews face-to-face since it gives the researches the opportunity to meet with the contact persons and through that create a relationship which facilitates them to open themselves up to talk freely, hence decreasing the level of bias. This would not be possible if the interview was conducted through mail or phone. However, the down side of this approach is that it is extremely time consuming since meetings need to be coordinated and set, and the we need to be flexible around the respondents time schedule since they are all working and are not as flexible as we are. However, since our approach is to conduct an in-depth qualitative research, this is the ideal way to retrieve empirical data.

Having chosen the approach to conduct an interview, the next question would be how should the interview be structured? That is to say, what level of formalization and in which order should the questions be posted to the interviewee. According to Lundahl & Kärvard (1999), interviews can be divided into standardized, non- standardized and semi- standardized. Standardized interview implies that questions are carefully put together and asked in the order in which they are set. Non-standardized interviews mean that the research group posts open questions so that the interviewee can speak freely, and since people are subjective, this method means little control. Lastly, the Semi standardized interview, hence the name, is an approach that holds the standardized nature of the first approach but questions are posted randomly. This approach suits us since we already know our topic and just need to see how the respondents react upon that, therefore we have chosen to use the semi-standardized interview method. Yin (1999) warns the tricky side of this approach. Since too leading questions would lead to bias and not paying enough with attention could lead to a too superficial result. Since time is valuable for our respondents, we want to make sure that we get as much information as we can in a limited period of time. We make sure to ask relevant questions which are derived from our research questions and are clear to ask the respondents to specify the answers whenever we wanted to have more details, such as giving us examples of the phenomenon described.

2.2.2.1 Preparations before an Interview

Since the empirical data functions as the foundation to the whole research intention, careful considerations and preparations are important. According to Ghauri, Grønhaug and Kristianslund (1995), there are three steps to prepare for an interview:

1. Analyze the research problem.
2. Try to understand what information needs to be retrieved from an interview.
3. See who is suitable for providing the research group with the information.

The first two points imply on the focus in the research topic. In order to achieve this focus, we read articles and literatures relevant to the topic and from these develop questions to the respondents. Another important link is to have the questions reflected back to the purpose of the question. If the questions are not consistent to the purpose per se, then the interview results might risk being too broad. It is also important that the questions are clear to the respondents, since the questions are formed by us who are involved in the topic, what may seem clear for us may not be clear for the respondents. These obstacles can be solved by letting a third party give an objective feedback on the formulated questions. Before going to an interview, having finished our draft with questions, we send it to our supervisor to ask for eventual feedback, this too assure that the questions are formulated accordingly.

Having mentioned the importance of having the questions consistent to the purpose per se, it is equally important to use it to guide us to the right respondent. Since the topic can be rather broad, so is the finding of right person difficult if we don't describe specifically what the intention of the research is.

Due to uncertain circumstances, the interview might only be a onetime chance. Therefore, it is important that we are fully aware and feel comfortable with all the aspects that are involved in the interview. According to Patel and Davidson (1994), there are two ways of registering the interview answers: either by making notes or tape records them. Since we are two people conducting interviews, we always split up the work by having one making notes meanwhile the other one post questions. Since we are conducting face-to-face interviews, we didn't want to exclude the opportunity to record them. Patel and Davidson (1994), state that the advantage with this register method is that nothing gets left out, and it functions as a backup in case something is forgotten or the researcher didn't have the time to make note. However, the downside of this method is that it is very time consuming and it could affect the outcome of the respondent. We are very aware of the time consuming procedure of transcribing material from the interviews, however the final product ensure hundred percent answers in the way the respondents have answered the questions posed, and this is important since it is the answers we analyze. The second obstacle is that the respondent might feel uncomfortable with having the conversation recorded since the topic per se can be of a sensitive kind, and this person would not like to get into trouble because of had said too much. Overcoming this obstacle will be further discussed in the anonymity section (see section 2.2.4).

2.2.3 Sampling

As we are interested in companies that have innovation as their core competences, this has become our main criteria when searching for suitable companies. Reflecting back to our purpose which is to gain an in-depth understanding of how different factors affect the commitment of employees towards innovation we have compiled a list of companies that we found to be of interest to us, they are:

Nokia	SonyEricsson
AEISO	Siemens
Hua Wei	Ericsson

Since we are interested to conduct a case study about commitment to innovation in a highly innovative company, we did not and needed not have a specific strategy of which company to choose from, rather we try to contact the companies and see which one that first shows interest for having us doing a research. Considering the amount of students who are writing their theses during the same period as we do, a lot of companies have already accepted students and can no longer help us. With some struggles, finally AEISO has shown interest in our research became therefore our object of study.

Conducting an in-depth case study of AEISO, we wanted to make sure that we get a holistic view of the R&D department. We made sure to include people from different levels in the department to get their voices which will function as our empirical basis for analysis. This reflects back to the research questions developed.

2.2.4 Anonymity

Having an in depth analysis of the company requires interviews whereas the respondent feel comfortable with speaking so that the answers give the researcher in-depth details. Due to our intention to have an in depth look at the innovation department of the company, this might mean that the interviewee feel uncomfortable with answering certain questions that reveal corporate secrets, therefore it is important to offer them a guarantee to not being harmed by telling us their perception and grant them the freedom to speak freely. Bryman and Bell (2003) stress that one way to do this is to offer the interviewees to be anonymous. Knowing that they are not revealed in the actual empirical data may give them a sense of safety for answering questions with no further consequences. Therefore whenever an interview starts, we inform the respondent that he/she has the option to remain anonymous in the research. Also after the interview, we will once again remind them the right to remain anonymous. Since we are only interested in interpreting the way the respondents perceive their reality, having the firm or people to be anonymous do not affect the outcome of the analysis.

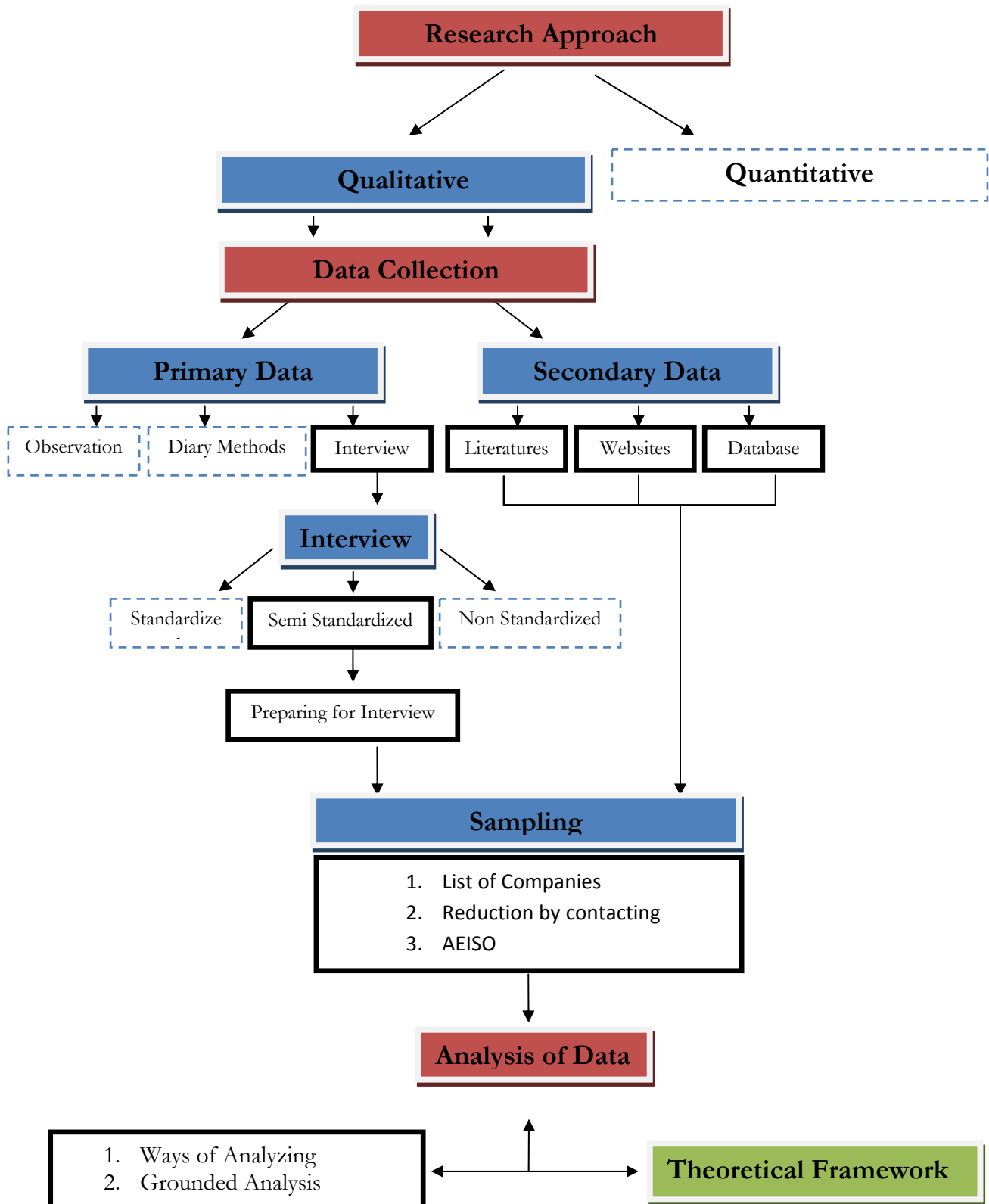
2.3 Analysis of Data

One big problem with qualitative way of conducting research, according to Easterby-Smith et al. (2004), is to figure out how to condense the highly complex and context-bound information into a format which tells a story in a way that is fully convincing to the reader. Not only does it require a clear explanation of how the analysis was carried out and conclusions reached, but also a demonstration of how the raw data was transformed into meaningful conclusions.

The authors further claim that there are two distinct ways of analyzing qualitative data, either through content analysis or grounded analysis. In the former one, the researcher goes by numbers and in the second one, the researcher goes by feel and intuition, aiming to produce common or contradictory themes and patterns from the data, which can be used as a basis for interpretation. Hence mentioned earlier, we did not want to concentrate on a positivistic way of analyzing data, therefore we are very determined that the grounded analysis method is suitable for this particular research since this method is heavily used with transcripts of in-depth interviews. Furthermore, it is carried out in parallel with what Yin (1994) call a method that relies on theoretical prepositions. This simply means that the original objectives and design of case study were based upon theories studied and eventually research questions were developed and by reviewing literatures, new insights are gained.

In parallel with this, the empirical findings will then be compared with the theoretical framework that the research groups has put together and this will hopefully generate interesting conclusions, in which we hope, reveal new findings or enhance the validity of the already existing theoretical base within the field. Section 2.4 is an illustrative roadmap of our methodology approach.

2.4 Methodology outline



2.5 Critiques of our research

To gather information about things or phenomenon is something we do in a daily basis. According to Patel and Davidson (1994), whenever the researcher(s) constructs its own instrument to gather information the problem of not getting the relevant information needed for the specific case often arises. One method that can be used in order to check on the quality of the research per se. is to look at the validity of the research. This determines the accurate description of the reality (Easterby-Smith et al., 2004).

2.5.1 Validity

An investigation is an action that can catch the reality, more or less. In order to gain consistency of wholeness in a research, a researcher needs to make use of observations, question constructions, interviews or the respondents openness in his/her answer during an interview. Especially sensitive are the questions posed to the respondents since the questions can put them in an intimate position, make them reveal something that could threaten their current position in their work. There are more factors that could affect the outcome of a social science investigation, and to measure something that the researcher is intended to invest is called validity (Svenning, 1999). What is important for us who are conducting a qualitative research is the internal validity. According to Bryman and Bell (2003) this means whether there is a good match between researcher's observations and the theoretical ideas they develop. Since we are doing a case study based on empirical material that is retrieved from in-depth interviews, we have tried to conduct as many interviews with different people from different levels as much as possible. This is to ensure that we get closer to a high level of congruency between concepts and observations. However, due to time frame we have only been able to conduct seven in-depth interviews which may affect the outcome of our research.

2.5.2 Qualitative research is too subjective and hard to replicate

Bryman and Bell (2003) state that qualitative research findings rely too much on the researcher's, often, unsystematic views about what is significant and important in their research. This is true since it is always a level of difficulty when choosing what people to include, how many, what theories to use and what pre-conceptions the researchers have towards the topic researched upon, it make it difficult if not impossible to have a total objective stand.

Also the fact that the research questions are formed by the researchers, this mean that already at the beginning the researcher already setup the direction in which the empirical data is collected. This in turn reflects back to a subjective stand rather than objective. Considering the unstructured nature of qualitative data, interpretation will be profoundly influenced by the subjective learning of a researcher during the research process. Since we are not interested to conduct a positivistic research, it falls naturally of why we haven't included a reliability section in this chapter. According to Seale (2000), reliability in a qualitative research has a positivistic approach, with this it means that it is designed to establish corroborating evidence for findings whose truth status is in doubt. For

instance, if people use the same methodology but conduct a different study and discover the same outcome of what previous research has resulted in; this “truth” in the research will then be enhanced. However, since our case study has a subjective stand and we are dealing with innovation which, hence mentioned earlier is ambiguous in nature, there is no point of measuring reliability in this context, since the result of our findings will be impossible to replicate due to the changing and subjective circumstances around our research.

- Chapter 3 Frame of Reference -

We have in this chapter compiled a set of theories that we found to be of interest when analyzing the empirical material. It starts with brief introduction of the concept of innovation followed by the describing the relation innovation has with Knowledge management. Finally theories around factors that foster commitment for innovation are discussed.

3.1 What is innovation?

First of all, definition of innovation can vary from different perspectives.

From knowledge and its implementation perspective, Tolson (1999) states that:

“Innovation is a positive, albeit challenging, component of professional practice that is responsive to an evolving body of knowledge”.

Nevertheless, in management practices, innovation is more specifically defined as a product or practice that is new to its developers and/or to its potential users (Klein and Knight, 2005). As industry competitiveness is strongly highlighted nowadays, innovation, from this perspective, refers to a firm’s ability to adopt new ideas, products, and processes successfully (Paladino, 2007).

In our thesis innovation is about change which particularly in the form of technology changes due to the property of the company that we are studying. The notion of innovation with a flow of related information and knowledge results in changes in the organizational knowledge systems (Nonaka, 1994).

3.1.1 Creativity and innovation

It is necessary to address the distinction between creativity and innovation. Firstly, creativity is defined as:

“a process through which individuals and groups arrive at ideas that are new and valued to those individuals, groups and others within their wider communities of practice.” (Xu and Rickards, 2007. Pp. 217)

However, Oldham and Cummings (1996) have a different perception than Xu and Rickards, they insist that creativity refers to products, ideas, and so forth produced at the individual level. Creativity is a precondition for successful innovation (Basset-Jones N., 2005) and often viewed as essential to support innovation and the development of new technologies (Moultrie et al., 2007).

Innovation implies the possibility of profitability to the organization. In contrast to creativity, innovative behavior is intended to produce some kind of benefit or achieve commercial success; it is expected to result in innovative output (Jong and Hartog, 2007). Utterback (1994) links creativity to innovation as innovation in industry is a process that involves an enormous amount of uncertainty,

human creativity and chance. Furthermore, innovation refers to the successful implementation of products at the organizational level (Oldham and Cummings, 1996). The term innovation, most importantly, implies newness (Johannessen et al., 2001, referred by Moultrie et al., 2007). Innovative activity may relate to new products, new services, new methods of production, opening new markets, new sources of supply, and new ways of organizing (Moultrie et. al., 2007). Last but not least, different from creativity, innovation is characterized by its uniqueness (Ojasalo, 2008) which means it is hard for other organization to imitate.

3.1.2 An attempt to define innovation

Since the company we choose for case study is characterized as knowledge-intensive firm, we would like to define innovation with relevance of knowledge work from which we can see the pattern how individuals affect innovation. Keeping in mind how individuals commit to knowledge work so as to innovation, we find the definition by Newell et al. (2002) valuable. According to Newell et al. (2002), innovation is an episodic process which is complex, iterative designed and decided. New ideas are created, diffused and implemented through this process in different contexts.

“The social construction of knowledge and the process of sharing knowledge across social communities are central to innovation.”(Newell et al, 2002. Pp.151)

The innovation process is described as a series of stage through which an idea is processed (Bujs, 2007). Four episodes: agenda formation, selection, implementation and routinization are iterative, overlapping and ultimately conflated (Swan and Clark, 1992). Agenda formation is seen as information collecting process which widely searches useful signals or identifies problems in specific environments to initiate potential innovation. A further episode is to select practical and useful signals which is in align with organization strategy and provide best competitiveness. Implementation is the most important episode among the four as it applies ideas into actual organization work and finalizes new products or services in reality. In routinization, new knowledge which has been developed in the process of new product development is put into standard working practice in order to learn from previous experiences. All of the four episodes involve interactions with multiple actors, multiple fields of knowledge and organizational tasks at the same time (Clark and Staunton, 1989 and Newell et al., 2002).

“It involves people with different expertise and experience working together-often over extended periods of time-and combining their knowledge in order to generate more effective work practices, usually in the form of new products or processes.” (Newell et al., 2002. Pp. 145)

3.1.3 Types of innovation

To take the extent of change in an organization into considerations, innovation is divided as radical innovation and incremental innovation. Radical innovations redefine the market and cause disruptive change within the organization. Incremental innovations are minor changes stemming from an orderly, natural progression in knowledge (Siguaw, Simpson, and Enz, 2006). As the

company we are studying is innovative in general, this dimension does not provide us an appropriate scope to understand innovation.

Innovation has been categorized into two different types-product innovation and process innovation in terms of changes take place. To illustrate, changes in the things as products and services provided to customers are product innovation, and changes in the ways products and services provided are process innovation (Bessant et al., 2005). Product innovation is mostly related to tangible new product or services as a result of technology changes, and it involves application of several fields of knowledge (Newell et al., 2002). Process innovation is referred as the improvement of business process, management work and organization practice. Furthermore, Ojasalo (2008) mentions that product innovation provides the most obvious means for generating revenues. Process innovation provides the means for safeguarding and improving quality and for saving costs.

It is frequently mentioned that the boundary between product innovation and process innovation is blurred. These two types of innovation are always integrated and take place in actual innovation activities. For example, a new product with latest technology is designed and targeted at a new market which is different from previous target market. This process involves not only product innovation but process innovation as well. To retain the company competences requires R&D as well as mainstream management work innovation. Therefore, as we concentrate on employees' commitment to innovation, there seems no need to make a distinction of these two types of innovation. Taking innovation as a whole in general is more helpful for us to understand employees' commitment in various aspects.

3.1.4 Contextual nature of innovation

Last but not least, innovation is highly context dependent. Nowotny et al. (2006) say, contextualization influenced the conditions under which 'objectivity' arises and how its reliability is assessed. Therefore, inter-firm networks, regions, education backgrounds, and occupations which social networks and social interactions individual belongs to can largely influence the capabilities of innovation (Newell et al., 2002). "There is no "best practice" in innovation. What works in one context may not be applicable in another because of the different knowledge, skills and understanding of the social group involved (Swan et. al 1999, referred by Newell et al. 2002). The contextual nature of innovation makes innovative organizations become distinct from others with their own competitiveness that others cannot imitate.

3.2 Innovation and Knowledge Management

Innovation is strongly linked to Knowledge Management since new ideas to innovation is generated from wide range of knowledge. Knowledge is created, shared and applied in all episodes of innovation. 'Innovation is frequently a primary purpose for knowledge management' (Newell et al., 2002:152). In other words, innovation highly depends on the creation and application of knowledge,

knowledge management has a critical role to play in innovation process. How to manage knowledge in organization with the aim for new ideas becomes the most central issue in innovation.

3.2.1 Innovation and ambiguity

The difficulty of innovation mostly derives from knowledge itself. Knowledge is characterized by ambiguity and uncertainty which means it cannot be clarified and completely made explicit. Ambiguity is referred by Alvesson (2004) as the possibility that multiple meanings or several plausible interpretations are made by a group of people without rational analysis, it is impossible to predict or institutionalize people's interpretations. In consequence, innovation is also inherently ambiguous and uncertain.

"It's difficult to know at the outset quite what will be achieved when knowledge is combined in new ways." (Newell et al. 2002 Pp. 142)

Ambiguity is especially salient in R&D work. Product innovation is "*inherently ambiguous*" (Dougherty, 1996. Pp. 425 quoted by Alvesson, 2004).

3.2.2 Innovation and Knowledge Management

Two tasks, managing distributed knowledge and getting people committed to innovation, are central to innovation work. Without doubt the difficulty to manage knowledge, as a result, is crucial to manage innovation.

On one hand, the purpose of knowledge management is to reinforce the creation, capture application and reuse knowledge to foster innovation. Although there is an assumption that the greater quantities of knowledge managed the greater capacity of innovation in the firm are improved. The capacity of innovation is related to the extent that how much distributed knowledge are centralized and effectively used. On the other hand, organization is a knowledge system in which collective knowledge is distributed and expands through social network. Particularly, knowledge relevant to innovation is widely distributed internally and externally in the organization. It includes the knowledge which initiates innovative ideas, at the same time, develop and implement innovation (Newell et al., 2002). Knowledge can be owned by individuals and collectively (Tsoukas, 1996). Although knowledge is initiated by individuals, knowledge is accumulated and socially constructed so that most organizational knowledge belongs to collective knowledge.

Managing innovation faces the same challenge as knowledge management - to overcome the sticky and leaky nature of knowledge. Knowledge is sticky when it comes to the situation of knowledge sharing within the organization. In contrast, Knowledge is undesirable easy to leak from the organization boundaries and captured by organization's competitors (Brown and Duguid, 2001). "Stickiness" and "leakiness" are not only used to describe different directions of knowledge flow but also indicate the difficulty to manage the flow of knowledge. With the aim of innovation, organization has to enhance knowledge mobility among employees in order to increase new creative

ideas. Meanwhile, to maintain organization unique competitiveness efforts have to be made to reduce the loss of knowledge to external environment.

Based on tacit and explicit characters of knowledge, three approaches to knowledge management for innovation are addressed according to different focus on each episode. Networking approach helps organization extend their boundary of knowledge for larger knowledge acquisition; community approach can increase trust and commitment to innovation in the episodes of knowledge creation and application; cognitive approach can develop technology or improve efficiency by reusing existed knowledge (Newell et al., 2002). Even though we do not specify which type of innovation we study, product innovation and process innovation do set up different requirements for knowledge management. In terms of capturing and transferring knowledge, much knowledge through product innovation can be codified in tangible forms though diverse source of knowledge integrated within a single product or service specification (Newell et al., 2002).

3.3 The importance of commitment in innovation

'Bringing the distributed knowledge together and getting people to buy into the innovation process is a major challenge for innovation.' (Newell et al., 2002. Pp. 142)

Individual's commitment to innovation can facilitate innovation work to overcome the obstacles of innovation presented previously. Commitment is the most important premise of innovation. Only if individuals commit to innovation distributed organization knowledge can be formed, transferred and developed. However, Salaman et al. (2005) state that the concept of commitment is very hard to define and one needs to be specific on what level the intended investigation is on.

Lim and Hung (2008) argue that under certain conditions, specific and difficult goals can lead to higher levels of performance in comparison with relative vague or easy ones. They further claim that it is difficult to accept difficult goals without demonstrating a subsequent commitment to the work. In a study made by Latham and Yukl (1975) state that involvement in the goal setting process contribute a great boost in the employees' commitment to achieve a goal. Based on the arguments above, we are going to look more on the concept of commitment in relation to innovation.

3.3.1 The necessity of commitment in Knowledge creation

Knowledge creation can only be carried out by individuals in an organization. In continuous socially knowledge constructed process, individual's commitment enables the flow of tacit knowledge, moreover, it makes sure that new knowledge is socially created through interactions between tacit and explicit knowledge. In other words, 'Commitment is one of the most important components for promoting the formation of new knowledge within an organization' (Nonaka, 1994). Newell et al. (2002) emphasizes the trust in knowledge sharing and knowledge creation. In such a context, knowledge can be created spontaneously as conceptual insight and practice is merged into practice. The author further explains that in order to reach commitment there must be trust between the

employees. The trust must be based upon institutional basis whereas each party is expected to gain mutual benefit out of the relationship and committed to deliver according to the details of the contract. This type of trust will very likely be related to the ability of the people to generate the knowledge creation. Alvesson (2004) who refers to Dougherty (1996) states that commitment is about mastering the tension between freedom and responsibility, calling for people who are committed to innovation and professional enough to see it through. This is further emphasized by Tan, Pan, Lim and Chan (2005) who claim that Knowledge contributions can lead individuals to perceive a loss of control in the organization; however it can also concurrently serve as a factor for enhancing contributors' image or reputation among peers and colleagues. Power relation in the group and how it affects the overall commitment for between people is also a factor, but this will be further described in section 3.4.4.

Innovation can be better understood as a process in which the organization creates and defines problems and then actively develops new knowledge to solve them (Nonaka, 1994). The author also states that knowledge creation in terms of new ideas and concepts are driven by continual dialogue between explicit and tacit knowledge rather than being simply reduced as information processing or problem solving. Tacit knowledge which is possessed by individuals has a personal dimension. It cannot be transferred by language or codification but through social networking activities. Knowledge, at the same time, is active, subjective, and characterized by the values system of individuals represented as belief and commitment. Without individual's commitment and participation in social network, neither tacit knowledge can be transferred nor will the conversation of knowledge creation take place. Besides the distinction of tacit and explicit knowledge, knowledge has another dimension: individual knowledge and collective knowledge. Sandberg and Targama (2007) define collective competence as a concept whereas individuals interact in performing a task that is impossible for a single individual to carry out alone. Ideas are formed and developed in the process of interaction between individuals and due to this particular reason, knowledge creation will not be possible for an organization with lack of personnel (Nonaka, 1994).

An organization is composed by individuals so is collective organizational knowledge created by the interaction of individuals. Individuals are the most crucial component and only creators in knowledge creation. Therefore, individuals' commitment to knowledge creation is the prerequisite of innovation.

3.4 Factors to foster commitment to innovation

Individuals' buy-in and commitment largely depends on their personal values and believes. 'Tacit knowledge has a personal quality which makes it hard to formalize and communicate. It is deeply rooted in action, commitment, and involvement in a specific context.'(Nonaka, 1994) Apart from personal attributes to innovation that organization is looking for during their recruitment, there are aspects in which individual can be motivated through organizational practices. With other words, factors that facilitate people to innovate are factors that make them more committed to their actual innovation work. Bessant et al. (2005) warns us about the easiness of finding prescriptions for

innovative organizations, however one must be careful with not falling into the chaos trap since not all innovation works in organic, loose, informal environments, concurrently, these organizations can sometimes act against the interests of successful innovation. Nevertheless, innovation requires energy to overcome this inertia and Bessant et al. (2005) have defined 10 factors that stand as a foundation in our research, they are: Leadership, organizational structure, Key individuals, Effective Team working, Individual Development, Extensive Communication, High Involvement, External Focus, Creative Climate and Learning Organizations.

3.4.1 Leadership

“Getting employees to work harder is not the same as getting them to work smarter, and sometimes one may contradict the other.” (Newell et al. 2002. Pp. 123)

According to Kärreman, Sveningsson and Alvesson (2002), Knowledge intensive firms are typically engaged in complex and difficult tasks that cannot be perfectly converted into standardized work procedures and regulations. Despite this fact, management can no longer take on their task in conventional management way, that is to say to have people working governed by rules, regulations, sanctions etc. and through that managers believed to have control over the situation. Sandberg and Targama (2007) say that in organizational environment where managers become more and more dependent on rapid actions to fulfill the customers need; there is a strong need for commitment and responsibility on the employee’s part. For organizations in such an environment it is therefore very dangerous if their people learn to do exactly what has been prescribed to them and don’t need to care for the consequence of their action. This is strengthened by Bessant et al. (2001) who claim that one should never be satisfied and have the mentality that successful management practice is never reproducible. The authors further explain that the successful factor for a Management commitment is a common prescription associated with successful innovation.

Commitment of employees is very much about leading through creating space and support within the organization but also to get highly involved in the groups work. Also the fact that managers need to take on a new role compared with conventional management style is in line with what Rohlin, Skärvad and Nilsson (1998) say that what is important for a leader in a learning environment is to view him/herself as a teacher and a coach. A leader in a highly innovative company is very much about taking care of people’s inherent driving forces, their commitment and their sense of responsibility towards their work.

3.4.2 Appropriate Structure

Bessant et al. (2005) claim that no matter how well developed a system is for defining and developing an innovative product or process, they are unlikely to succeed unless the surrounding organizational context is favorable. The author further state that organizational structures are influenced by the nature of tasks to be performed within the organization. Rapid product innovation and improved customer responsiveness are being achieved by having early involvement of key specialists, closer market links and user involvement, team work development, personal development and other organizational aids to co-ordination.

Starkey (1996) state that controls based on operating logic reduce the innovating organization's ability to rapidly, cheaply and frequently test and modify new ideas. The more differentiated an initial effort is, the greater is the likelihood of innovation. Sandberg and Targama (2007) state that organizational design, work roles, lines of authority and accountability are central ingredients in influencing people's behavior. Since innovation is about knowledge creation, settings for a learning environment are crucial to foster creativity but also to enhance once knowledge. Sandberg and Targama (2007) call organizations that foster learning and influence the people's way or working for learning organizations. Within this frame of concept, learning climate is one of the components which will be further explained in the creative climate, section 3.4.9.

Bessant et al. (2005) and Newell et al. (2002) stress the importance of networking. The integration of relevant knowledge through the development of social processes and networks is crucial for innovation. Such networks are also important for encouraging the buy-in and commitment that helps innovative ideas to be actually implemented in practice. Social networking widens the boundary of knowledge collecting and sharing. It can be through formal activities or informal social activities. Especially, formal social network provides more possibilities to reach out sufficient knowledge for knowledge creation, such as company meetings, workshops, seminars and so on. Personal network within the organization is helpful for knowledge creation and sharing, and the group self-identification is even more helpful for individual's buy-in attitude in innovation.

3.4.3 Key Individuals

Starkey (1996) highlights several informal roles that he calls critical roles in the organization, this is in line with what Bessant et al. (2005) meaning with key individuals in an organization. Due to the complexity and uncertainty nature of innovation, it is not always that an idea can go all the way through to become a product. To overcome this problem, there should be key individuals maintain a flow. The authors describe three different roles whereas we mention the one that is related to commitment to innovation:

- **Idea Generators** - and these are what the organization wants to pay extra focus upon since they are the ones holding the knowledge for innovation and they are the ones the innovative firm wants to make more committed about. Starkey (1996) and Bessant et al. (2005) state that these individuals see new approaches to linking technologies to markets, products with new processes etc. Without these people in the company, the organization will have very few if no breakthroughs.
- **Sponsors, Coaches, or mentors** – The role of this person according to Bessant et al. (2005) has the power to influence and is able to pull the various strings of the organization. Hence mentioned earlier about leadership, this person provides informal support and access to resources. Starkey (1996) state that such a person does not necessarily need to have a detailed technical knowledge of the innovation, but they need to believe in its potential and trust the idea generators potential. The trust is essential for enforcing commitment of the idea generators to dare to think creatively.

3.4.4 Effective Team Working

According to Newell et al. (2002), since knowledge is very distributed, the diversity nature of knowledge could not possibly be hold by one single individual, but rather knowledge creation is typically the outcome of an interactive process that will involve a number of individuals who are brought together in a project team.

Political factors within the team have significant influence on innovation. Starkey (1996) states that power relations will always exist and power must shift in according to the authority of the situation. This further implies that whenever an issue is highly ambiguous in nature hence innovation, the intuitive mode is required and those individuals with significant capacity in this area should assume more influence regardless of their hierarchical level in the organization. Distributed and uneven power relations have certain impact on decision making process of innovation.

This binds together the point mentioned above of why management cannot control the idea generators in the team that deals with innovation since the skills needed to solve a particular problem may not be in possession of the manager/leader, and enforcing control lead to opposite effect which is a diminishing commitment.

Effective team working in innovation projects is about being able to trust each other's knowledge and only this will foster a commitment to a knowledge sharing phenomenon which is a premise for innovation (Bessant et al. 2005). This is further emphasized by Alvesson (2004) who states that trust and care will motivate individuals with others' support in the situation of resistance and lacking of creative ideas.

3.4.5 Individual Development

We focus on individual development in terms of training and education. Training and development provide new or existing organization members with the skills and knowledge they need to perform work (Cummings and Worley, 2005). Cooperating with recruitment selection and deployment, training of firms' specific knowledge which associated with competitive advantage is one of the primary success factors (Hatch and Dyer, 2004). It emphasizes the importance of creating and transferring key knowledge within the organization

According to Bessant et al., 2005, people value the experience of acquiring new skills and abilities, and also feel valued as part of the organization. Therefore, continuous training and development is considered as a better incentive than monetary rewards to get individuals committed to the organization as well as innovation. Moreover, sufficient training and development is essential to individuals for the sake that they feel empowered and tend to take more responsibility and initiative. From the other perspective, empowerment in training itself can also facilitate learning and individual development. Enabling individuals and groups to set goals and supervise their activities positively supports successful exploratory learning (Kalling T., 2007). In align with other HR practices such as, performance appraisal, goal setting, training and development as one of rewards will encourage organizational innovative behaviors so that improve individual performance in innovation. By

carrying out training and individual development activities, an atmosphere of learning environment can be created and we will demonstrate it later in section 3.4.10.

3.4.7 High Involvement

High involvement, more specifically, high employee involvement is to increase individual's input into decisions that affect organization performance and employee well-being (Cummings and Worley, 2005). However, Bessant et al. (2005), argue that one can't empower people but create an environment and structure in which they will take responsibility. Despite of the argument above, there is a trend that organizations increasingly turn to employee involvement with the aim to enhance the commitment of their employees. Since innovation is much about change, the more people are involved in change of innovation the easier for them to accept the change Furthermore, successful innovation are concerned with organization adaptation (Cumming and Worley, 2005).

What Cumming and Worley (2005) point out is valuable and useful for our study: power, information, knowledge and rewards are the four elements that promote involvement. In interpersonal dimension, power means some people are able to get other people to do things they would not otherwise do (Watson, 2002). Political factors will much affects the outcome of any situation in which organizations working. Apart from necessarily possessing sufficient knowledge and skills which are required for decision-making; rewarding people for their innovative behaviors, we want to highlight that providing people with enough authority to make decisions regarding their own work and autonomy to the work methods, and accessing relevant information for decision-making in time is crucial to foster high involvement in an organization.

3.4.8 External Focus

Bessant et al. (2005) state that characteristic of successful innovating organizations is an orientation which is open to new stimuli from outside of the organization. One of the main key points in this section is to have a strategic intent of understanding the users need. Kristensson, Magnusson and Matthing (2003) agree with Bessant that understanding customer needs and requirements constitutes an essential foundation for sustained competitiveness through innovative new products and services. Why this is an important factor for commitment of employees to be more innovative is that it functions as a source of triggering. Knowledge is socially constructed, but things could tend to be circulated around the same way of thinking. Sandberg and Targama (2007) call this for circularity of understanding. This basically means that people operates in a circular manner because developing understanding of an issue is always based upon pre-understanding. The authors further explain that in order to renew competence, which in this context is to generate new knowledge, the activities should be designed to break the current circularity of one understanding and try to redirect it to an alternative circularity of understanding. Based on this fact, one can see that involving external sources, such as considering users need, is a way of retrieving new ways of looking at an issue. Since innovation is largely about generating ideas, being stuck will automatically lead a negative affection on employee's commitment towards the issue per se.

3.4.8 Extensive Communication

Highly linked, not only to external focus (mentioned in section 3.4.8), but also inside of an innovative organization is the requirement for extensive communication (Bessant et al., 2005). With this it means the multidirectional of communication. As we have discussed earlier about the need to have a flat structure with flexible authority power and addition to that, it is equally important to have mechanism for resolving conflicts and improving clarity and frequency of communication across such surface. This according to Watson (2002) as an important factor to innovate since such an organization is highly problem-solving oriented and the knowledge is distributed all over the company, there is a need for an efficient knowledge mechanism for communication.

One of the mechanisms is to have cross functional teams. Newell et al. (2002) state that the objective with having cross functional teams is to encourage faster lead time in product development. This implies that during the innovation process, from idea to product, the employees are exposed to a stressed time frame and hence mentioned earlier that innovation is a concept that demands space, having this constraint will decrease creativity hence a diminishing of commitment.

Team briefings are another mechanism that is commonly used in innovative organizations. These meetings allow people to give an update to its team mates. According Starkey (1996) states that it is very crucial for having direct feedbacks in highly innovative firms since direct contact is an effective way of keeping customers, competitors and technology development close to the organization. That is why many innovative companies have their own knowledge sharing systems, hence mentioned (hence mentioned in section 3.4.10).

3.4.9 Creative Climate

Baer and Frese (2003) stress the need of innovative organizations to develop organizational climates in which people participate feel safe in taking interpersonal risks, are encouraged to propose new ideas, openly discuss problems, and proactively approach work and neglecting to do so could lead to many driven implementation attempts to fail.

Culture is a complex concept that is hard for management to change since it is deep rooted in people's value and beliefs. Referred to Edgar Schein model of levels of culture, retrieved from 12 Manage the Executive Fast Track (2008), culture is divided into three levels whereas the interest for us is in this thesis is on the surface level, namely artifacts. Bessant et al. (2005) state that although management cannot directly change culture but it can intervene at the level of artifacts – by changing structures or processes – and by providing models and reinforcing preferred styles of behavior. Kanter (1984) referred by Bessant et al. (2005) provide a list of factors that stifle commitment to innovate. Amongst them are the ones we mentioned earlier about Top-Down dictates, poor team working, poor communication, but also limited tools and resources and low level of personal development.

One particular point that is of special interest is the emerging idea of “Intrapreneurship”. In an organization with a supportive and innovative culture, individuals with bright ideas can progress

them with support and encouragement from the system (Bessant et al., 2005). Being able to have one's own idea developed will give rise to a sense of ownership, this makes an individual more committed to the work per se.

3.4.10 Learning Organization

The last factor mentioned that Bessant et al. (2005) has brought up is the concept of organizational learning, seeing that knowledge is the basis for competition in today's highly competitive environment. Watson (2002) defines a learning organization as such:

"Learning organization is an organization in which experimentation, reflection and mutual learning is normal aspects of the work of all organizational members and in which learning provides a key source of satisfaction for individuals as well as enabling the organization to be innovative and productively adaptive." (Watson 2002. Pp 196)

The author further explains the importance of maintaining a rich informal environment which is heavily information laden. This will result in knowledge creation which we already by now know people being more committed to the innovation. Bessant et al. (2005) further emphasis the importance of focusing on the innovation challenge, that is to say ways of getting close to users (see External focus in section 3.4.8), ways of managing project and harnessing and sharing information. The last one is of great importance. This is according to Newell et al. (2002) knowledge management, intent to encourage acquisition, creation, sharing, manipulating and developing of knowledge within an organization in order to enhance effective performance. This includes how knowledge is being shared, stored – in form of database and used. This strategic intent is what Watson (2002) would call managements aspiration of persuading employees to commit themselves and work actively towards the job.

- Chapter 4 Case Description -

In this chapter, we will start with a brief introduction of the company just to give the reader an overview. Thereafter we will reveal more around the company claim with some further description of how the structure is like. Things will finally lead to a description of how people work in AEISO.

4.1 Company Background

AEISO is a global provider of mobile multimedia devices, including feature-rich phones, accessories and PC cards. The products combine technology with innovative applications for mobile imaging, music, communications and entertainment. The result of this is worldwide recognition that creates compelling business opportunities for mobile operators and desirable, fun products for the company's end users.

AEISO is most successful with undertaking product research, design and development, manufacturing parts of the company. Together with the marketing, sales, distribution and customer services department, they have succeeded to gain recognition both domestically and internationally. Their global management and R&D are located in major countries in Europe and have plants in The US and Asia.

The company is currently in an expansive phase, and especially in the site where we have retrieved our interview sample. The company is showing better results than in long time and it is expecting to release even more products in 2008 than previous year. In 2006 it was an estimation of over 760 sold mobile phones worldwide. AEISO is increasing their width by producing both hi-tech and low-end phones - for all budgets and needs. As the innovation manager at AEISO says on an interview:

"We strive to be one of the 100 most innovative manufacturers in the world"

Innovation manager (personal communication, 2008-04-10)

AEISO is a fairly young company with many young professionals. The average age of people working there is 35 years old and major part is recruited to the company directly after their university graduation. These new recruits all hold an engineering degree.

4.2 Company Claim

Innovation and entrepreneurship play an important role in AEISO's corporate culture. Since the company is growing and working with undertaking products with a very short life cycles as well as competing with competitors in a highly intensive industry environment, there is a need to seek for potential markets. It is also equally important to have the belief of constant innovation development as it is crucial for the company to remain competitive strong. As the innovation manager from AEISO says:

"Innovation work is much about the culture, innovative ability of the company and how we strengthen it and how we insure it remains strong looking at the challenges we have ahead." "That means that innovation is pretty much in everybody's job description, regardless if you work with controlling, strategy or if you are a software engineer, innovation is perspectives in different flavors."

Innovation Manager (personal communication, 2008-04-10)

AEISO organizational structure is flat in nature with concern of its working content and organizational culture. It is easy for employees to get in contact with each others in different departments, or even different regional sites although their work is locally based. The company hosts a very strong community culture which is characterized by caring, trusting, high involvement, and guidance between individuals regardless of the level of their positions. Managers are seen as coaches who support individual work and keep everything on track in accordance to the time frame set as deadlines in the organization. Not only is an individual's work exposed to regular reviews and evaluated by managers but also his/her working goals are set by the collaborated efforts between managers and individuals. People rely on informal ways of retrieving information as they get stuck with their assignment. Informal network is significant both on the employee level as well as management level. When talking to the people in AEISO, everybody agreed upon that a strong cultural characteristic of AEISO is the mentality of openness towards each other and being generally supportive when problems arise. People's perception of the organization is very dynamic in the sense that a lot of things are happening and not one day is similar to another.

Sense of Entrepreneurship at AEISO is very high, and this is yet another core value of the company. Since a lot of knowledge is embedded in engineers who are the specialists for undertaking the new ideas of product development, the company makes sure to foster the mindset that everybody can make a difference in the company. Having said this, the result is that the employees feel very encouraged and free to come up with new ideas of how the next potential mobile phone can look or what functions it could contain. In short, if one has an idea and it seems to be a good idea for the firm, the company would compile a group of specialists to develop the idea into an end product. The notion of being able to have ones idea realized in parallel with high level autonomy in ones work give the employee the sense of ownership for the project. This automatically means that the employee has the freedom and flexibility to advance in the organization and the limit of where

he/she can go is set by him/her. The Company facilitates this climbing with offering workshops and trainings and other resources.

4.3 The Current State of the Organization

AEISO is a very engineering oriented company and the major part of the company's workforce has, hence mentioned earlier, an engineering background. They see themselves as trendsetter rather than market follower with their strong capacity of innovation. Innovation in AEISO emphasizes on the technological aspects in products. This means that the process of innovation is product oriented rather than customer lead oriented. The company is now in the phase of designing an innovation process for the simplest reason that they are growing rapidly and they want to follow the patterns of innovation work in reality. This means that they are working on a process that will facilitate the idea realization of the employees to ensure that the company keeps up with the continuous value adding state of mind.

Innovation work in the company is very distributed and they don't have a strict structure towards how to innovate. Although AEISO has a well established R&D department in the organization, its R&D work is distributed amongst on-going projects throughout the organizational departments rather being seen as isolated. This is a company belief with the reasoning that it enables the R&D department to have a good connection to the world, a more attached sense to the reality. As a result, innovation is generated from all over the company and everyone is proactively pursuing innovation rather than waiting for innovation ideas to come. An integrated model which is combination of software and hardware to a final phone with influences of a technological process and a business process is applied in the company. This integrated model draws the general sketchers of innovation, however, when it comes to a specific manual of how to innovate, there is no best practice. It is very much about the mutual trust that people have towards each other due to their own specific field of specialization. Because there are no clear procedure of how to create knowledge (innovation), there is no clear benchmark of what product is good or bad and one has to rely on the expertise gut feel. This is how the innovation manager describes the nature of the organization:

"...it's extremely powerful of how we do things. It not chaotic but everybody is expected to participate in innovation and to share their ideas, how to move forward. The company is a totally different animal, totally different ways of doing business, totally different products, and totally different way of defining the market. That means that it is not right to get these structure things right from the beginning. You have to allow the organization to evolve, after a while you see patterns and you realize: here we have something we need to work with because this scenario does not work that well."

Innovation Manager (Personal Communication, 2008-04-10)

The innovation managers further explains that since the technological processes and business processes are run in different logics, in consequence, there are possibilities to control technology risks but not business risks. Although the company does not have a best practice of generating innovations (knowledge creation), it has developed technological roadmaps and product roadmaps

in which the company is very strict on using when working with innovation projects. Technology (contingency innovation) measureable by technology road maps, product road maps and business innovations largely depends on, hence mentioned above, the feeling of the experts. On one hand, AEISO as an engineer oriented company technology tends to overrule the innovation process, on the other hand, business decisions of innovation seems to be too ambiguous to make and from another aspect it constrains technology innovation. The company is trying to find an ideal balance between these two processes so that they won't lose any potential opportunities towards innovation.

4.4 How Things are carried out

R&D department is composed of several lines and each line consists of one to three sub-teams (see appendix 1). Engineers are arranged in different teams and report to their own team leaders. When a new project is set up the project manager who takes responsibility for keeping everything on track during the whole project has to coordinate with different team leaders in different departments to seek project members. The project group is formed by individuals with diverse expertise throughout the company. Whenever a project starts in AEISO, there are always informal activities that the team members do together in order to get to know each other. This is to ensure that people get to know who are part of the team, what they do, providing an opportunity to know whom to turn to when there are actual obstacles on the way. However, activities could be different, everything from occasions to eat together to team building activities. In parallel with the activities, briefing about the assignment will also be brought up.

Whenever a project starts, there is an obligation to go into the internal database, the "lessons learned", to read about past projects that are related to the current project. The main purpose is to let the team members aware of what have been done before and how it went. It is not a database that contains only successful projects; even failures are available to ensure that people will not perform the same mistake again. An Engineer says:

"...for every new project, there is a requirement of the individual to go to the data base and read the information of what is learned before working on the new project. Based upon these lessons learned, the individual is expected to generate new ideas to the new project. All these will then be evaluated in the performance management system. "

Engineer # 3 (personal communication, 2008-04-21)

The performance management system mentioned above is a system in which the purpose is to measure personal development in AEISO. With concern of developing personal abilities, it works in a way whereas the manager and the engineer together set up goals of achievement before the project starts. Since everybody has their own specific task in the project, this will then work as the foundation for evaluating how the employee has taken on the assignment, if goals have reached and

if not, what has gone wrong, and especially what can be done better to ensure that individuals constantly improving themselves.

Based on the facts above, the consequence of this is an organization that put much emphasis on having constant meetings. There are three types of meetings in AEISO's daily work: *information meeting, problem solving meeting, goal setting meeting*. On average every engineer has to attend more than 15 meetings per week and the numbers of meetings vary from team leaders to engineers. Besides having meeting with your line manager about setting goals, or overly be evaluated of past contributions. There are also weekly meetings with the team in the project whereas the project managers inform to everybody what the current situation looks like, what have been done good and what went bad so the whole team can have a more concrete overview of the situation. Besides having these weekly meetings, the team also needs to write a report of the progress and hand it to the manager.

The mentality towards knowledge sharing is very distributed throughout the whole organization. Everything is based upon an informal setting, that is to say people are dependent on personal network once problems arise. Dialogue with other colleagues is an inestimable asset that the company sees potential in and this give rise to the group mentality within the department. An engineer says:

"...although we have a hierarchy, the group we work in is very flat in nature, and the same thing applies to the power relation."

Mechanical Engineer # 1 (Personal communication, 2008-04-21)

So far, we see that the nature of work is team based in AEISO whereas everybody is expected to get involved and generate ideas and opinions on the ongoing process. Managers are often seen as a coach in the project and make sure that he is involved with the groups work. One Engineer says:

"...I would describe leaders to function more like coaches during the working process. They will ask you questions such as: what can I do to facilitate your work? I would see my project leaders as someone who is part of a team rather than someone who is hierarchically distanced from the group. This reflects what I said earlier that whenever there is a need for working OT, the project leaders will also stay to work together with the team."

Mechanical Engineer # 1 (Personal communication, 2008-04-21)

The result is that people are open towards helping each other out. Therefore for people in AEISO, it is very easy to get access to other people regardless of levels, hence mentioned earlier. This is the informal setting of the project, whereas problem solving is not limited to the group but could be

spread out in the organization. Looking back at how things are done in the project team, what the manager would do is to set a deadline for everyone, and everyone is expected to reach a certain pre-determined result. However, how the team members do to reach this result is up to him/her. So the employee has a very big freedom to plan his/her time and work during. Managers are very clear about to make the employees realize what they should expect from themselves before the deadline, but in general he/she would try to loosen up the controlling behavior since trust towards others expertise is highly important. So in short, a manager's job in a project is more of coordinating to make sure that the members are on track, and brief them about the current situation and what the group should be heading.

Overly when talking about idea generation, every idea is welcomed recalling the company's culture of wanting to make people aware that every individual can make a difference and contribute to the company. This starts already at the very beginning of one's career in AEISO. One Engineer states:

"We always have to create something that can be attractive to the customers. We need new ideas. Every year we have some innovation awards, like all the employees, we can create our own ideas which could be very popular in the future."

Software engineer (personal communication, 2008-05-06)

For the innovation manager at AEISO the challenge lays in the fact of how she does things, to take concrete action to show employees that they are all eligible to be innovative. The innovation manager further stresses that it is important to offer the employees with tools and processes to make sure that they know that it is equally important for them to innovate as it is important for the company. So to summarize, there are both formal and informal links of how things are carried out in an innovation process, everything from retrieving past experiences from the database (Lesson Learned) to have dialogues with experienced people in the field when one has problem.

Chapter 5 Analysis

“The emergence of the three voices”, is the section in which we try to analyze our empirical findings making use of the theoretical framework that we created. We, as the researchers will work as the third voice to give the reader an insight of how we argue around the topic per se.

5.1 Factors of Commitment for Innovation at AEISO

5.1.1 Community

“The term community indicates the significance of organizational culture, but culture goes somewhat beyond interaction between people around the same work process. Culture means a certain degree of homogenization of the mindset of people in the absence of direct interaction around work.”(Alvesson, 2004 Pp. 177)

Based on the quotation above and referring to the three levels of culture by Schein (12Manage the Executive Fast Track, 2008) community can then be seen as to represent behaviors that spring from beliefs and norms deep rooted in everyone’s mind in the organization, meanwhile equality, trust, openness, care and high involvement are things that could be changed through organizational setting. From our interviews we see a pattern of community mentality towards innovation in AEISO. The mindset of equality and trusts, care and being helpful is possessed by every employee. As mentioned by one of interviewees:

“...I feel that my personal opinions and ideas are very important contributions to the project team, that I can really influence the outcome of the decision. Although we have a hierarchy, the group we work in is very flat in nature, and the same thing applies to the power relation. This is one of the significant parts of the company where people from different levels can meet and talk in forums and gatherings, so I personally don’t think that there are people that I cannot get in contact with.”

Mechanical Engineer # 1 (Personal communication, 2008-04-21)

Watson (2002) says trust is the further requirement of loose control, hence mentioned earlier is a premise to foster commitment towards innovation. The author also stresses that in addition to monetary, comfort and security benefits, individuals are likely to demand freedom from close supervision or short-term monitoring. Based on the quotation above, we can see that trust between a leader and the employee is a fact. Leaders trust their subordinates’ abilities, they have strong confidence in the employees’ problem solving skills, by constantly emphasizing the “Yes, you can do it” mentality in which we believe stimulate the intrinsic motivation of the employee. Successively individuals, as receivers, gain confidence to overcome the obstacles in the innovation process and in parallel being trusted to take on bigger responsibilities will enforce their commitment toward their innovative tasks. Reflect back to what we presented before, Starkey (1996) says leaders do not necessarily need to have a detailed technical knowledge of the innovation, but as a coach they need

to believe in its potential and trust the idea generators potential. The trust is essential for enforcing commitment of the idea generator to dare to think creatively.

We see from the empirical material that equality and trusts come hand in hand when talking about decision-making of projects in an open organizational context that everyone is welcomed for discussion in order to innovate. According to Watson (1994) People who trust each other and have no strict calculative concept of exchange, which indicates a strong level of reciprocity and a two-way exchange of understanding, are likely to achieve complex work tasks together, or solve difficult organizational problems, especially in innovation. In our belief, this is salient in the project groups at AEISO. To elaborate further, project team members respect each others' specializations in the part in which one is responsible for (see appendix 1). Despite of the employee's unique specialization in the team, everyone's opinion is appreciated and is taken into serious consideration. They work together with an emerging aim and that is to innovate, regardless of what positions the different employees are holding in the project team. Partly because leaders do not have sufficient details or specialist of knowledge to make decisions on their own (Further discussed in section 5.1.2). On the other hand, it is because the mutual trust of each other's expertise among all team members in the belief that everyone is willing to innovate. Bessant et al. (2005) stress that effective team working means trusting each other's knowledge which is an important factor to foster commitment to innovation.

Von Krogh, (1998) says care as an articulated value, training programs in care-based behavior will facilitate caring relations which aim to reduce uncertainty and conflict of interest in knowledge creation. Reduction in these has an impact on fostering employees' commitment towards innovation. Newly recruited AEISO employees get the influence of care in AEISO from the first day. Two-day-orientation is compulsory for them before starting to work at their own departments. These two days provide individuals with knowledge of the company and chances to get familiar with other employees. The conceptions of self are learned by interpreting the responses of others in situated social interactions (Ashforth and Mael, 1989). Based on this Ashforth and Mael claim, we see that AEISO employees continuously get influenced by care from their colleagues and from different training programs. Through all these activities, individuals interact and get influenced by each other. By showing care towards each other, this we believe generates the feeling of togetherness.

We have very strong "we" feeling whereas everybody tries to help each other and also the fact that most of the people in the group are young people that just got from universities, they kind of share the same mentality and background, and this help to emphasize the 'together we can make it happen' mentality."

Project manager (personal communication, 2008-05-05)

The feeling of care and togetherness give rise to an open atmosphere. Care and openness support the work process directly by allowing individuals to share experience about their work and thus understand it better (Newell et al., 2002). Seeing that individuals are willing to talk openly to other colleagues about their obstacles in work at AEISO we see that this is a result of care and togetherness' impact on the organization. As a result, in the employees' daily work, friendship and

mentorship are based on sincerely care towards each others. This is further emphasized by a project manager.

“I really like the fact that people are open and happy talking with each other on the hallway when you pass by.”

Project manager (personal communication, 2008-05-05)

As mentioned by Alvesson (2004), looking with others rather than looking at others at their work indicates that care can facilitate innovation. It seems like everyone is open to discuss one’s own work with others regardless one’s positions in AEISO. Whenever individuals confront difficulties at work, they tend to talk to other colleagues and discuss about the problems. For us, it seems that strong support from their colleagues and managers makes individuals stick to innovation work rather than giving up on half way. Trust and care will motivate individuals with others’ support in the situation of resistance and lacking of creative ideas (Bessant, 2005). Recalling what Baer and Frese (2003) say, a climate that encourages people to propose new ideas, openly discuss problems is needed for pursuing innovation. It facilitates innovation, and at the same time makes individuals more committed to innovation.

“When I feel stuck I will take a walk outside and come back to talk to my colleagues, tell them what’s my problem then they will give me some suggestions. I will again try to solve the problem.”

Software Engineer # 2 (Personal communication, 2008-05-06)

In our concern, from a knowledge sharing perspective, this active continued interaction between individuals eliminates something that Brown and Duguid (2001) the “stickiness” of knowledge. The flow of knowledge largely depends on the extent of social networking. What we mentioned before in 3.4.2 is that the integration of relevant knowledge through the development of social processes and networks is crucial for innovation. Formal social network provides more possibilities to reach out sufficient knowledge for knowledge creation while personal network is helpful for knowledge creation and sharing.

Individual’s network expands through project meetings, courses in different fields, workshops and seminars, which aim at developing individual abilities, all over the year to everyone within AEISO. We can see that these formal activities foster three important activities: knowledge sharing, individuals’ cooperation as a group and to build personal networks. AEISO has a very positive attitude towards informal individual socialization in order to build up emotional ties between individuals. Leopold et al. (2005, Pp. 347) claim that one of the most common problems in teams is that people aspire to be ‘comfortable’ with one another, believing harmonious relations are facilitator of team performance. An informal network which is based on friendship ties or shared affiliations is the basic of community of practice (Newell et al., 2002. Pp. 120). We can see that activities in AEISO are carried out to foster co-operations within the company. The company offers certain amount of money for employees to go for after work activities, play bowling for example. Moreover, companywide Christmas party and summer party are sponsored and organized by the company. In addition to “fika” (gathering for coffee and cake) every Friday, individuals in the same

project also get together for lunch occasionally. Without doubt, it is definitely necessary for individuals to know more about other people from the same team or project. Since the rich informal environment is heavily information laden (Watson, 2002), these informal activities increases the flow of information so as to facilitate innovation and get individuals commit to innovation.

5.1.2 Management/Leadership

According to Salaman, Storey and Billsberry (2005) the leaders' role in an innovative organization is to ensure that innovation occurs ubiquitously and continuously across all aspects of the organization. One of the important factors that we found being crucial to make the employees in AEISO more committed to the project is managers' commitment to the group per se. However since innovation is a very ambiguous concept, hence highlighted by Alvesson (2004), phones development in parallel with very short life cycles, settings cannot be set beforehand and the leaders need to know that things are not always under their control. Rohlin et al. (1998) state that a manager in a learning environment should see himself/herself as a teacher or coach who helps its team members to foster their inherent driving forces and their sense of responsibility towards their work.

"...I would describe leaders to function more like coaches during the working process. They will ask you questions such as: what can I do to facilitate your work? I would see my project leaders as someone who is part of a team rather than someone who is hierarchically distanced from the group."

Mechanical Engineer # 1 (Personal Communication, 2008-04-21)

We can here see that the employees' perception of their leaders in AEISO is not of conventional management style in whereas managers make use of their authority power to force the employees to do certain tasks. This means that the managers avoid performing micro management which Alvesson and Sveningsson (2003) explain is a phenomenon when managers are taking away the decision power from people that should take the decisions. This to us is an important factor for the engineers to be more committed to innovation since because fostering the inherent driving forces is not something that can conducted through orders. Rather they should be trusted upon their own skills to overcome a certain problem. That is why managers in AEISO are perceived by their subordinates to be more of a coach, to be available once the employees feel that they are stuck or need advice to solve the actual problem. This is an indication on managers' high awareness of the importance to have their subordinates to be more committed to their work.

Whenever a process is taking longer than expected the engineers have to stay and work overtime, however managers involved in the project will also stay to work with them. Seeing that a manager is willing to stay with the team members under pressured time, such as mentioned above, gives the employees the feeling that they are being supported in critical times, which in turn raises their sense of commitment towards their work. This argument is supported by Bessant et al. (2005) who state that Commitment of employees is very much about leading through creating space and support within the organization but also to get highly involved in the groups work. Seeing that leadership is freeing up the constraint of the employee because they are now been giving bigger space, this

logically means that the engineers at AEISO get more involved and by that meant that the engineer get more committed to their innovative tasks. This argument enhance the theory by Cummings and Worley (2005) who say that involvement is to increase an individual's input of decision making that affect the organization performance and employee wellbeing. We asked about what managers do during a project, a project manager answered this:

“...you are facing a lot of problems and different aspects of the product development have their different time plans, and it is extremely hard to coordinate so my big challenge is basically to have everything kept in order and coordinate so things work smoothly and get done on time. To make sure that everybody is working in the same pace and have a good collaboration spirit between each other. We try to perform loose management whereas people are been giving autonomy in the project, but it depends on what project and what size of the group. But we do try to minimize the level of authority as much as possible.”

Project Manager (Personal Communication, 2008-05-05)

The manager further emphasized that she is doing coordinative jobs because she don't have the knowledge to get the hang of all the details that the projects is about, therefore she cannot give order to people to what to do. What we found to be interesting to extract from the answers above is the function of the project manager. The person does not seem to be involved in the actual problem solving of the product per se rather than creating a pleasant atmosphere for the team members to solve the problem. This might not be a surprise looking at what kind of products AEISO is making, namely cell phones. Since cell phones mean requirement for high level of innovation and innovation itself, hence highlighted by Newell et al. (2002), is a concept derived from knowledge which is generated through interaction in-between individuals, every individual's voice in the knowledge creation is important. Therefore managers in AEISO, assuming that they know the premises for knowledge creation, cannot order an engineer of what to do due to the very reason that they do not have enough knowledge to do so.

This argument is supported by Starkey (1996) who states that whenever an issue is highly ambiguous in nature, hence innovation, decision power must shift in accordance to the authority of the situation. This is further emphasized by Sandberg and Targama (2007) who say that Supervisors or middle managers cannot take all the responsibilities on themselves, instead they have to delegate work activities, give initiative to group discussions, establish follow up routines and reward systems that stimulate the employees to take responsibilities for themselves and they rely upon their capacity to cope with and resolve their problems.

One important thing that seem to spring from the empirical findings that is crucial for managing an innovation project is to show trust to your team mates. This is a challenge for the managers since innovation is, hence stated by Newell et al (2002), a concept that is highly ambiguous and makes result hard to predict and managers need to coop with this uncertainty. Rohlin et al (1998) stress the importance of managers to be able to show trust in coworkers but at the same time monitor the process. This philosophy seems to be put into practice in AEISO when a project manager is being asked how he/she copes with the uncertainty in the project:

“...Since I am a quite structured person, I focus a lot on the progress in parallel with time but at the same time I don't want to give the impression of being to controlling. Because as I think control is good to a certain point sometimes, I still try to tag down and try to get more relaxed with my group since I think it is important to be able to trust your group members.”

Project Manager (Personal Communication, 2008-05-05)

The project manager said that usually the engineers are being informed about when the deadline is, but how the work is done until the deadline is up to every engineer them self to deal with. In our belief being trusted does not only give the employee the sense of acknowledgement that what he/she is doing makes a difference but it also encourage him/her to come up challenging task with a different mindset which demands him/her to take responsibility to the action he/she takes. Having the employee being more encouraged to take more responsibility means an attachment to the project per se which in turn make them more committed. This is further emphasized by Targama and Sandberg (2007) who say that managers should in general abandon the principle of managing by providing detailed information how things should be carried out. This would just restrict people's freedom of action. Instead they should lead by making people internalize visions and ideas, and by stimulating employees to make more use of their inherent capabilities and take responsibilities. AEISO seems to be very aware of this point since it offers courses and seminars for all levels in the company to maintain this mindset:

“... Read more books about how to build better teams, nowadays I am attending to courses and seminars that teach us that.”

Project Manager (Personal Communication, 2008-05-05)

One of the engineers interviewed said that her manager would not give her the solution whenever she faces problem, rather he would give her advice to how to approach the problem. Giving advice in our opinion is not the same as giving the employee the solution. The difference lies in the fact that the former still requires the employee to make his/her own decisions based upon his/her judgment of the problem per se. Targama and Sandberg (2007) state that ambiguity is helpful as it leaves it open for the employees to interpret the message and add their own ingredients to it, ambiguous goals can be helpful since they define a direction without being too specific about how it should be done. So based on the empirical finding in addition to a theory by Newell et al. (2002) we can see that problem solving is not based upon instructions given to the employees rather they try to see the problem through their own understanding, this make people to become more empowered and start to act upon their own judgment. This leads us to the personal development section which will be discussed after this section.

We see that being aware of the potential of group dynamic, managers at AEISO will face less difficulties of letting go the employees with their way of working, however this should be supervised since too tense means control which we have seen above harm the employees' commitment towards the company and too loose management could lead to risking the project per se. In our concern having the mindset of trusting your employees have two benefits, one is to lessen burden and

secondly is enforcing the employees' commitment towards the company. This is in line with what Alvesson (2004) who states that trust and care will motivate individuals with others' support in the situation of resistance and lacking of creative ideas. With other words, trust enhances the chance of commitment towards innovation.

However, in our belief, having the leader coordinating the project seems not enough to explain the commitment employees have towards AEISO. So far we have described why management in AEISO function as coach and how it enhance employees commitment towards the company, however we haven't touched upon the point of how these so called "coaches" do to support the team members within a group. Rohlin et al. (1998) stress the importance for leaders in innovative environment to build agendas and networks so they can through spontaneous and casual meetings utilize the network to achieve their agenda. Thus this emphasize upon professionals making more use of their "gut feel" than relying on formal planning. When asked how the employees are supported by their superiors, an engineer says:

"...Leaders in this company usually help us with introducing us to people they know that are specialized in the specific field, so we can ask them for help."

Software engineer # 2 (Personal Communication, 2008-05-12)

The engineer further explain that the company is highly meeting oriented and this is also how they share knowledge with each other, and sometimes when a problem arises, he will turn to people he knows in his network or ask his manager for advice. We can see that in AEISO, heavy emphasis is put upon informal way of knowledge sharing and this make good sense to us since hence mentioned earlier that managers don't have the full expertise that could help everybody in the project team; he/she has to rely on his/her personal network when supporting its team members. From a commitment perspective, we see that the crucial point is not that managers know whom one can turn to; rather that the employees know that there are always someone to turn to if a problem arises. This is supported by Bessant et al. (2005) who stresses that a premise to innovation is to promote extensive communication which means communication that functions multidirectional. Since we know that AEISO is dealing with products that have very short life cycles, time is a crucial variable that affects the engineer's delivering of a solution on the actual deadline. Knowing that there are always possibilities to retrieve information from people is to say that there is an encouragement to faster lead time in product development. Newell et al. (2002) further enhance our argument by stating that since innovation is a concept that demands space and having this constraint of reaching the right source to solve the problem solved, it will create more space and time for the engineer to devote for in generating more ideas, which automatically lead to higher commitment towards innovation. So in conclusion, manager would be the one that affects the lead time of product development to go more smoothly by directing the team members to the "right" people as problem arises, this will lessen the burden for engineers who don't need to spend much time of retrieving a solution rather devote that time to innovate, hence enhance the commitment towards innovation.

So, we see that first of all, when dealing with employees that cannot be controlled by conventional management style, it is important to create a network of experts in which the manager can make use of to help its team members in a struggle. We also see that the directing is something significant in the organization and the gain from this is that the employees are still expected to find their own answers, and managers are only “there” to show them the direction to find their answer. This means that whenever the employee finds the answer, it would be because of his/her sense of judgment which at the end not only give him/her a better sense of self but also being encouraged to take on bigger responsibilities next time, and this will be further discussed in the next section.

5.1.3 Personal Development and the sense of entrepreneurship

According to an article written by Oldham and Cummings (1996) who state that complex and challenging jobs (i.e., those characterized by high levels of autonomy, skill variety, identity, significance, and feedback) are expected to support and encourage higher levels of motivation which enhance the employee’s commitment towards the company compared to relatively simple, routine jobs. Looking at the AEISO organization, we see that the job that the employees do is highly complex due, hence mentioned earlier, the ambiguous nature of innovation work. However, despite the ambiguous nature of the project we have noticed that the employees interviewed are highly committed to their work, and most of the time it is about the challenge that the work brings. However, challenges exist in all kinds of job, so we believe that this factor itself is too superficial to understand why AEISO members are committed to their job. When asking the innovation manager about how innovations usually spring up in the organization, she says:

“...how it takes an idea into innovation those steps we are not very founded of. That was fine because in the company we have a very strong culture of entrepreneurship and innovation so it worked really well.”

Innovation Manager (Personal Communication, 2008-04-10)

The above indicates that although there is not exact notion of how innovation springs up in the organization, the innovation manager is very confident about the entrepreneurial spirit that flows in the organization. We tried to look upon what this actually means and we found out that besides having a real flat group structure in projects, hence mentioned in the management/Leadership section, the company provides many opportunities and resources for an individual to advance in the company. Bessant et al. (2005) stress that one of the factors that stifles commitment is lack of resources and tools for employees working with innovative tasks. We believe that this is a factor in which management in the company see huge potential in because innovation is sprung from knowledge and knowledge itself has a tacit nature which according to Newell et al. (2002) and Alvesson (2004) is embedded in know-how of a person which has taken considerable times to develop, and loosing it would not just take time to replace it but also the fact that there is a chance that the knowledge get moved with the employee if he quits the company. Therefore, considering AEISO which devote a lot of resources such as providing the engineers with courses and seminars is a sign of potential that the company sees with the employees. This is further emphasized by Leopold, Harris and Watson (2005) that high commitment is about to create opportunities for personal and

career development built into people's employment, which is expected to continue over a longer-term period, potentially covering a variety of different tasks. Therefore, developing the engineers in the AEISO is not only a strategy towards fostering innovations; it is also in our belief a secured way of preventing people from leaving the company with valuable knowledge.

Looking at the entrepreneurial side of the company, it is not strange to see why employees are committed to AEISO. According to Hisrich, Peters and Shepherd (2008) entrepreneurs are individuals that think differently from non entrepreneurs. The former must usually make decisions in highly uncertain environments where time pressure is immense. AEISO is a company that hence mentioned a company who foster the belief that everybody can make a difference in the company and due to this particular reason, if one has a good idea, the company will provide resources to realize the idea into a real product. Bessant et al. (2005) call this for "Intrapreneurship" whereas it means that in an organization with a supportive and innovative culture, there are supports that help one person to realize its own idea into a product. We believe that since the idea is sprung from the engineer, the engineer will feel a sense of ownership once the idea get the possibility to get realized, and due to this particular reason, this person will most likely be more devoted toward the product development, hence committed to innovation. However, besides feeling a sense of ownership towards the product there is another sense that is important for fostering commitment towards innovation. This is where the sense of responsibility comes into describing commitment. Before starting to analyze, let see what the people at AEISO feel towards the projects that they have been assigned to:

"...It gives me a sense of responsibility, and since different people have different roles in the project, everybody's opinion is very valuable for the project which also at the same time gives me a sense of involvement and a sense of ownership. I personally feel that the project is how I will make it to be, so in that sense I feel that I own the project and would like to do my best to make it works."

Software Engineer # 1 (Personal Communication, 2008-05-12)

Other engineers also told us that they have been given a quite high level of autonomy stating the freedom to plan their own work before a deadline. Bessant et al. (2005) explains that training and development are essential elements to enabling people to take on more responsibility and demonstrate more initiative. Since innovation work is about thinking outside of the box, taking on responsibility and initiatives is a sense of involvement, hence highlighted by Cummings and Worley (2005), a way to foster the employees' mentality to give more input to the company.

We see that managers are aware of how important employees are to the company and by trying to foster the mindset of the employees and tell them that what they contribute to the company is not only valuable, but also important. This according to us emphasis on the fact that the managers really show a genuine attitude towards letting go the responsibilities since they try to furthest extent to not interfere with the engineers work. This is further emphasized by Baer and Frese (2003) who say that in the long run, however, a high degree of personal initiative in the workforce leads to new ideas,

smoother production and service processes, better implementation of innovations, and ultimately to better performance.

When asked about the interference of managers in the engineers' work, we noticed that the engineers seem to agree with what the managers have told us, which make us further believe that AEISO do really give the employees the chance of taking on responsibilities, which is a factor for making them more committed to their job. Giving the employees the chance to take the responsibility is like giving them the freedom to do their job, only if it is done properly. This is then enhanced by Cumming and Worley's (2005) argument that opportunities for commitment is to allow people to select the necessary behaviors freely, explicitly and publicly.

Letting the employees take responsibility is also to give them a certain level of autonomy in their work. This is something that we found that the employees at AEISO think is a reason why they feel good about their job. According to Cummings and Oldham (1996) when jobs are complex and challenging, individuals are likely to be excited about their work activities and interested in completing these activities in the absence of external controls or constraints. This suggest that if an individual is given a responsibility of a task, he/she expects that the manager would trust him/her about it, otherwise the opposite might happen which means people get de-motivated and automatically loose commitment towards their job. However, luckily this seems not to be the case for AEISO since the employees seems to be very satisfied with what the companies do to help them develop and advance in the company. Some engineers said this:

"...I would say that when it comes to advancement, the company is very untraditional. There is a huge space for personal development. The company invests a lot on its employees for instance, there are a lot of trainings that one can attend to and one can set her/his own goals and based on how you perform, you set your own ambition and pace for advancement. This is a learning organization whereas people are encouraged to take the next step of advancement which makes people motivated since they feel that they can develop, both in the technological aspect as well as in the leadership aspect."

Mechanical Engineer # 1 (Personal Communication, 2008-04-21)

The innovation managers states that AEISO is a company that invests in non monetary rewards since it believes that is what makes people more committed to the company. One concrete example, which we believe is an important and crucial milestone for personal development in the company is that everybody that works in the R&D have to at least have gone through a product patent registration procedure. We believe this is an important factor to foster commitment to innovation in two points: First of all, since the product is something done personally, this attach a certain belief of contribution to the company which in turn mean readiness for more responsibilities in the company, and as we have seen earlier, responsibility is a factor for commitment towards innovation. Secondly, this is tied to recognition which will be further discussed in the reward and recognition section and how people through this become more committed to their work. The sense of contribution is in line with what Bessant et al. (2001) says that people value the experience of acquiring new skills and abilities since it gives a sense of being part of the organization. Seeing that AEISO is offering

courses, trainings and encourage the employees to go through patent registration procedures are signs that they are very concern about making their employees feel capable of taking on responsibilities in the company, which in turn reflects back to being more committed towards the company.

Besides having this autonomy, and the chance to take on responsibility, the management also has a hand in the development of the employees and that is through their performance management system. According to Leopold et al. (2005), Performance management is seen as a loose body of knowledge used to help people make sense of their organizational experiences. Goal setting theory claims that people work better if they have clear, realizable and significant goals. It argues that people will become more committed to their work if they believe their efforts will result in tangible achievements that will help them to fulfill their personal needs. An engineer said this:

“...This management system is a measuring system that let you see how you have developed during this period of time and what you have achieved compared to what is set. This is attached to a bonus which functions as a reward. These are the general goals, when it comes to personal goals; it leads to advancement in the organization which often means higher responsibilities.”

Mechanical Engineer #1 (Personal Communication, 2008-04-21)

So, as we now see, the responsibility appears again, which further enhance earlier discussion around it being an important component of making people more committed. However, having a performance management system is not only a way of managers to see how its employees develop, it also functions as a safety card for the employee to incrementally take on more responsibilities, it is a system that benchmark the employees own personal development. As Leopold et al. (2005) say, the Performance management system make an individual confront and take responsibilities towards their own limitations and this limitation on the other hand reflect back upon this individuals need for the organization. So based upon this argument, we see that it makes good sense of why employees feel good about working for AEISO because it does not only provide opportunities for taking responsibilities, but these responsibilities are incrementally added accordance to the speed of the employees personal development:

“...Another factor is that I always get informed of how I am developing, for instance I have a monthly meeting with my manager of how I am progressing within the set goals but also what is missing for me to go to the next level. Further is the level of responsibilities which is incrementally added to your work, and hence mentioned earlier, people are encouraged to take responsibilities, and this is some sort of confirmation that tells me that I am functioning in my work and also that I am capable of doing my work, which for me is motivating.”

Baer and Frese (2003) say that since employees must increasingly perform activities that are more interpersonal in nature, feeling safe in interactions becomes important for personal development. Having a deeper look into the word safeness in the AEISO context, it means the safeness of daring to speak out one's own opinions without any negative sanctions. Some of the engineers interviewed said that although managers are in general more experienced than themselves, but whenever the

engineers have opinions, they will feel that they are equal in importance compared to managers' opinions. This is a sign according to us that shows that people are not afraid of giving their opinions, and no wonder people are committed to their works since they are feeling that they are actually contributing to the company, which is hence mentioned earlier a sense of ownership.

Finally, another importance in personal development is through feedback. One only learns from looking back in history, and this is a premise for learning. For AEISO which has an intense meeting culture, this is no problem. The Lesson learned, is a good example of AEISO concern of employees learning. It is a data base that contains information on all the projects that has been taking on in the organization and every individual is obliged to get into the system whenever a new project starts to see what have been done, what could have been done better etc. This strategic intent is what Watson (2002) would call managements aspiration of persuading employees to commit themselves and work actively towards the job. Beside above perspective, another perspective is also related to foster commitment for innovation, namely what Sandberg and Targama (2007) mean by breaking from the circularity of understanding. Since the engineers innovations is based upon how they understand the task per se, by making "Lesson Learned" to be a obliged moment in the innovation process in a project, the engineers will then see what other engineers have done and maybe through that break the way they see the project. Hence mentioned earlier, creativity is an important source to innovation.

5.1.4 Recognition and Rewards

From our empirical findings we find out another important factor that reinforces commitment to innovation in AEISO – recognition as a reward. In AEISO there are different rewards in forms of social recognition with the purpose of bringing up one's commitment to innovation, in addition to one's belongingness to the company. Sayer (2007) says that people as needy beings have a range of different needs and only when these needs are met, people start to flourish. The author also states that recognition as one form of rewards in terms of respect, esteem and approval of others, which are crucial in human needs, is one of the various human needs. He highlights that we are psychologically in need of others recognition. People get to committed or motivated if their needs can be met by certain behaviors. By satisfying human needs for social recognition, these rewards enhance individuals' enthusiasm to innovation. Following we are going to take an insight in to AEISO's social recognition and see how it affects individual's commitment to innovation from internal and external perspectives.

Individual gains recognition from others through various kinds of rewards, and the feeling of recognition depends on deployment of scare resources (Sayer A., 2007). That is to say, within AEISO, individuals' social recognition comes from possession of scare resources or opportunities that others do not have - they are being rewarded to innovative behaviors. The belief that other human needs for self-development have higher priority than monetary rewards, this is held by management in AEISO. According to one of our interviewees, the innovation manager, monetary

rewards to innovation are down played and the sense of achievement which comes from social recognition is promoted instead in AEISO.

“Money is the worst incentive. If you just think about your own life, when you have perform the best what will you wanted the most. It may not be you have get thousands of dollars but the feeling of achievement. It is important to keep this spirit.”

Innovation Manager (Personal Communication, 2008-04-10)

Specifically, rewards in forms of social recognition from other members in the company is amplified in AEISO, such as having dinner with leaders, interviews to be published in the company magazine and so on. A high-commitment organization is characterized by various rewards linked to performance (Leopold et al., 2005). We see that the importance of innovation can be amplified by activities in terms of various rewards through company’s reward system internally for innovation performance. Individuals who have significant contribution to innovation can even have paintings of themselves hanging in the hallway in the company and the right to call up meetings with managers no matter which positions they are in.

The company also host an annual dinner for everybody that has registered a product/ solution that has been successfully approved just to highlight the innovative contributors. Personally I think this is something really great and also a factor that makes me look forward to go to work every day.

Mechanical Engineer # 1 (Personal communication, 2008-04-21)

As we presented earlier, the entrepreneurial context at AEISO, everyone at the very beginning of their career has a strong drive for achievement. Any opportunity of gaining social recognition which rewards innovative behavior, or even for self-development, is considered as a great chance to success. Individuals who are rewarded by these precious opportunities are sure to get respect and approval from others who intrinsically seek for achievements. As their needs of recognition are met, their perceptions of innovation as a result are enhanced so that they are more committed to innovation. In accordance with Bessant et al. (2005), above is in line with what we discuss in 3.4.5, acquiring new skills and abilities is more valuable to individuals than other monetary rewards, and for possessing scarce resources social recognition gets them more committed to innovation.

Under an external context, recognition is initially highly related to personal social identification. Social identification is the perception of oneness with or belongingness to some human aggregate (Ashforth and Mael, 1989). Only if individuals identify themselves as one of the group, they will be committed when they receive social recognition. Organizational identification is a specific form of social identification (Ashforth and Mael, 1989). Individuals first identify themselves as one of the company; they see themselves representing the company to the world outside along with their products. Since AEISO represents itself to its consumers as a young company full of innovative

ideas, its employees easily identify themselves as individuals with great capacities of innovation. Individuals are committed to innovation.

People can enhance their self-confidence by doing what they are expected to do in stressful real life situations. Having achieved results, they can observe and therefore confirm for themselves that they can do it'. (Sandberg J. And Targama A, 2007:143)

In our belief, it is not hard to sense that individuals in AEISO have a strong drive for achievement. Individuals display pride when confront situations where they see their new phone or project outcome. First of all, the actual phone and project outcome are symbols of their hard work. Through this they are able to see their innovative ideas applied in reality. One of our interviewee mentioned that the project he is working on now is for the new phone which AEISO will release in next two years; every new product which individual devoted their time to is called one's "baby", "daughter" or "son". It is also the same with software engineers when they complete their new stable software to a new phone. They are strongly encouraged and motivated to innovation with the presence of actual outcome of their work. The usage of metaphors not only emphasizes the importance of responsibilities but also feeling a sense of ownership of the company and products under the recognition as well as from others outside of AEISO.

"I recall one time when I was out with my children to watch a movie and when always before movies there are these previews and commercials, and in one of the commercials it was about the phone I was in charge of and my daughter would yell out; mom, that's your phone. That makes me kind of proud. That is also something that drives me to do a good job to be able to see my product in the market, also the fact seeing people using the product is something I find really motivating in my work."

Project manager (personal communication, 2008-05-05)

Identification with an organization enhances support for and commitment to it (Ashforth and Mael, 1989). Hence, in align with our discussion, social recognition of AEISO's products, which derive from individuals' innovative knowledge, are acknowledgements of the innovative capacity of the company. Since individuals identify themselves with the company it is apparent that the acknowledgement of their phones from people outside the company is an approval of their efforts which makes them excited about and committed to their innovation work.

- Chapter 6 Conclusion –

In this chapter we will have a conclusion that summarizes the main points of the whole thesis and there will be a session where we bring up our contribution of the study as well what we could recommend for future studies.

6.1 Summary

We have the ambition to look at what factors affect employees' commitment towards innovation at AEISO. Through our pre-understanding of knowledge work in parallel with literature review, we have created a framework in which we derived our research purpose:

Our purpose is, through a case study on a high-technological mobile phone company, to see what and how different factors foster the employees' commitment towards innovation.

Looking at the company overall, the significant factor that works as glue, connecting different parts together is the community climate signifying sense of equality, openness, care, high involvement but most importantly, trust towards each other. Through our research, we see a pattern of a group mentality whereas everybody is encouraged to make a difference in the company. Trust in AEISO is very important in order for the employees to feel committed towards the company, since it creates the sense of freedom for thinking outside of the box. Trust goes beyond managements trust towards the skills of the employees; it stretches around the whole department give rise to a reciprocal mentality of helping each other out whenever obstacles arise. Therefore the power relations in a group project are extremely low, and this is an important premise for trust to work. Managers cannot and are not expected to know everything rather provide the employees with direction of whom they can talk with whenever obstacles arise, making use of their network that they have built from their former experiences. Development of social processes and network is crucial for innovation at AEISO. Meanwhile formal social networks provide the possibilities for the employees to gain knowledge from past projects (Lesson Learned) informal network is helpful for knowledge creation. As we already know that knowledge is socially constructed whereas people generate new ideas through interacting with each other

Managers do not have a direct affection on employees' commitment towards innovation rather, they can work as a coach and provide the employees with the right resources to overcome a problem, so in overall, one can say that this works because of trust. Managers' trust in employees creates a mutual belief that the employees can overcome problems in the innovation process. On the other hand, since the employees feel trusted by his surrounding peers, he/she will be confident enough to take on challenging work tasks which in turn means taking on bigger responsibilities. We see that managers role in the whole "drama" is to make sure that the process go smoothly by directing team members to the "right" people whenever problem arises, and we have found that not only managers

are doing this. Even colleagues that have had former experiences within similar problem help out. Knowing that one can “always” get help and knowing that one is still being trusted, despite of getting help gives the employee a sense of safeness in their development towards taking on bigger responsibilities which we believe foster commitment. This is the reason why the entrepreneurial spirit is high at AEISO since people are constantly encouraged that “everybody can make a difference” and one’s achievement depends on his/her own pace. Therefore, whenever employees come up with ideas of what seem to be potential for the company, AEISO will provide full resources to realize the idea into a product. This enhances the ownership feel of the employee which in turn leads to commitment. The embedded knowledge in the employees is something that AEISO see potential in and since the core business of the company is to develop high technological innovative products with very low product life cycle, they need to assure the employees to remain committed to their innovative tasks and we see it as help the engineers to develop their skills is not only a strategy towards fostering innovation but also, in our belief, a secured way of preventing people leaving the company. Autonomy is of mediocre in the organization, meanwhile managers do not interfere in how engineers do their work in the project, a sign of managers not performing micro management, soft control whereas whenever the person is outside of the frame that has been delegated to him, managers will get in to ensure that the employees remain on track. Performance management system at AEISO create a setting in which the individual is encouraged to confront and take on responsibilities towards their own limitations and this limitation on the other hand reflect back upon this individuals need for the organization. So we can see a mutual dependency between AEISO and the employees. Having milestone goals has shown to make the employee more committed to their work since they see result in tangible achievements that will help them to fulfill their personal needs. Encouraging the employees to go through a patent registration is one good example of a milestone in their career. Having contributed something to the company will be awarded partly of a symbolic amount of money but employees and managers stress the fact that it is the sense of achieving recognition is the drive of making employees more committed to their innovative tasks.

Looking at the findings above, this was not a surprise a surprise for us. Lowendhal (2005) defined three generic strategies of professional service firms (see appendix 2.) whereas one is defined as a problem solving or creativity based strategic organization. What signifies this kind of firm is a highly complex organization that typically delivers services involving a high degree of innovation to enhance competence. Authority is context depended on expertise and individuals seek for peers support. With mediocre level of autonomy, goals are set by teams and conflicts are solved by expressing opinions from team members. Challenges and personal development are required by individuals as well as provided by the company.

Accessing all the criteria of creative problem solving firm with our findings, it is apparent that AEISO belongs to this type of firm. Thereby derived from our analysis of this particular company, in addition to the features presented by Lowendhal, we assume that the different commitment factors are a result of the firm’s strategic intention.

6.2 Contribution and Suggestion for Further Studies

Although not trying to generalize the findings, we believe that this will give our readers an interesting insight of how theories could be applied into real life situations. We found out that besides enhancing existed theories of creative problem solving firm, from our analysis of how individuals commit themselves to innovative tasks in AEISO, recognition as a reward is an effective measure to foster individuals' commitment towards innovation.

Knowing what factors that have sprung from our research, we further suggest to conduct the research with a quantitative approach. Using the factors retrieved in this research and form it to a quantitative research will mean to explore which factor(s) is the most crucial for fostering commitment towards innovation.

Since motivation of knowledge workers are coming from within, taking this into consideration we suggest further studies within recognition as a reward for innovative behaviors in order to discover larger acknowledgement of the commitment concept.

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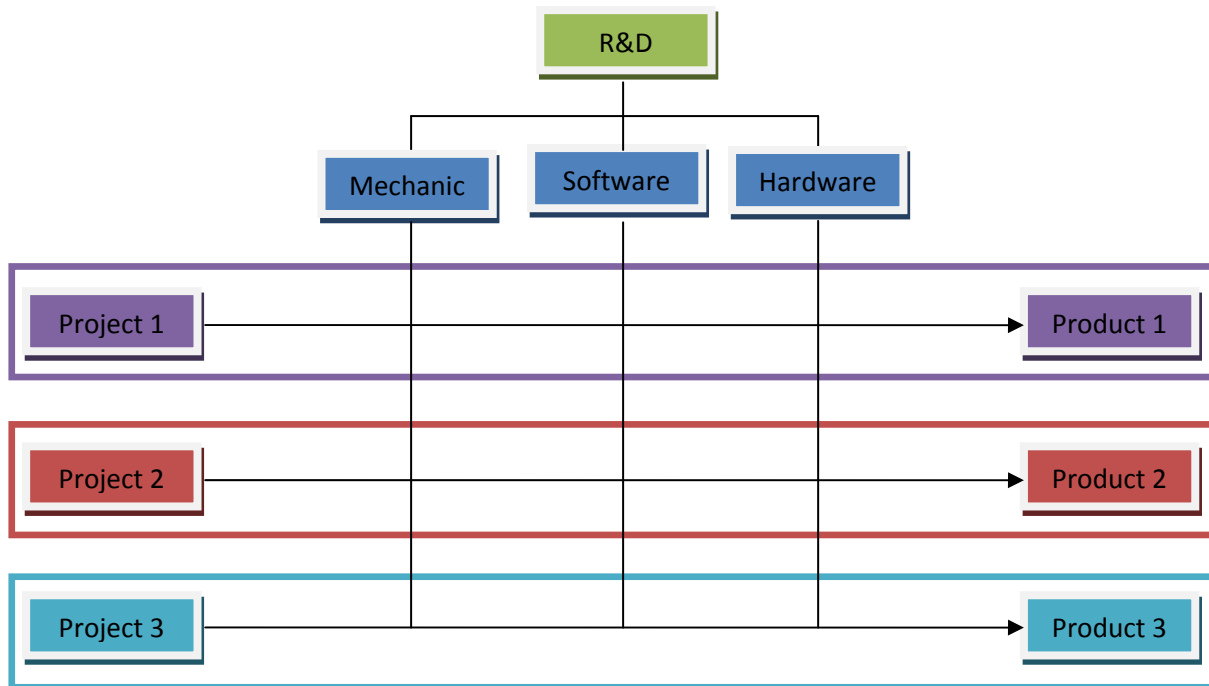
Empirical Data Sources:

1. Innovation Manager – April 10th 2008
2. Mechanical Engineer #1 – April 21st 2008

3. Mechanical Engineer #2 – April 21st 2008
4. Mechanical Engineer #3 – April 21st 2008
5. Project Manager – May 5th 2008
6. Software Engineer – May 6th 2008
7. Software Engineer – May 12th 2008

Appendices

Appendix 1 How a team is compiled in a project at AEISO



Appendix 2 Three Generic Strategies of Knowledge Intensive Firms

	<i>Adapting solutions</i>	<i>Client relation</i>	<i>Creative problem solving</i>
Priority	Job security	Autonomy	Learning, Innovation
Risk aversion	High	Low	Medium
Goal setting	Firm	Individual	Team
Primary goal	Sell or develop solutions	Pleasing the client	Enhancing competence
Authority	"The boss"	The client dec. maker	Professional expert
Reference group	Firm	Client	Academe/peers
Status/Rewards linked to	Loyalty, New solutions, Sales	Client satisfaction, Retention	Creativity, Challenging projects won and completed
Demand from organization	Org. Support	Challenging clients, Autonomy	Challenging projects, Expert colleagues
Degree of autonomy preferred	Low	High	Medium
Primary conflict resolution mode	Loyalty	Exit	Voice

