Approaches Towards Innovation - What's Preventing Companies From Being Innovative

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Abstract:

Encouraging innovation is becoming more important for countries in order to sustain economic growth, performance and competitiveness in a world of fierce marketplace competition. However, previous studies and research reveal that there is a worldwide decline in innovation within organizations, especially in Sweden where there has been evidence showing that this country has difficulty turning its great innovation potentials into company benefits and profitability. More specifically, people who have innovative ideas at work can hardly transform these ideas into real innovations that help organizations grow. This paper seeks to discover what's behind this, and what's hindering knowledge intensive firms from being more innovative. Fifteen employees from three different companies were interviewed, and based on the material garnered the reasons behind this situation were analyzed. Furthermore, by discussing the innovation process management and leadership styles adopted in different phases of innovation process, we have come to the conclusion concluding, depending on the variations of the driven forces, innovation processes can have different phases where different factors play critical roles, and leader should be conscious of the need to exploit different leadership styles to lead distinct and different innovation processes. The most effective approach appears to be the right mix of both of these leadership styles to garner the intended outcomes of supporting, encouraging and sustaining innovation within the workplace.

Keywords:

Innovation, KIFs, Leadership Style

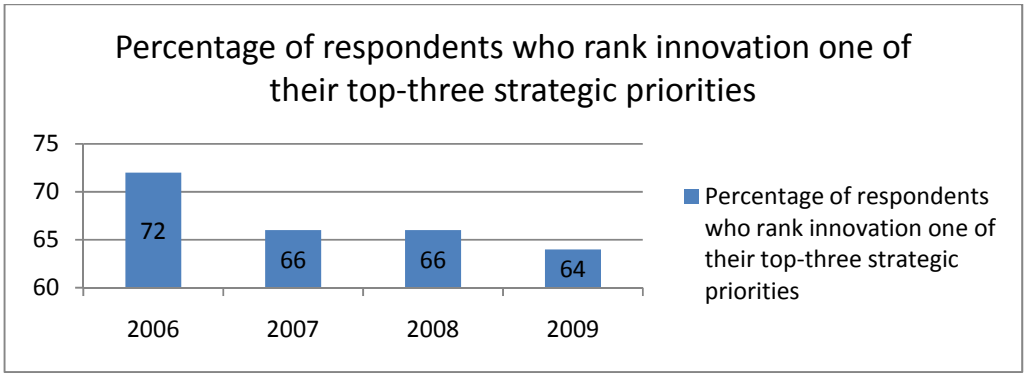
The Authors:

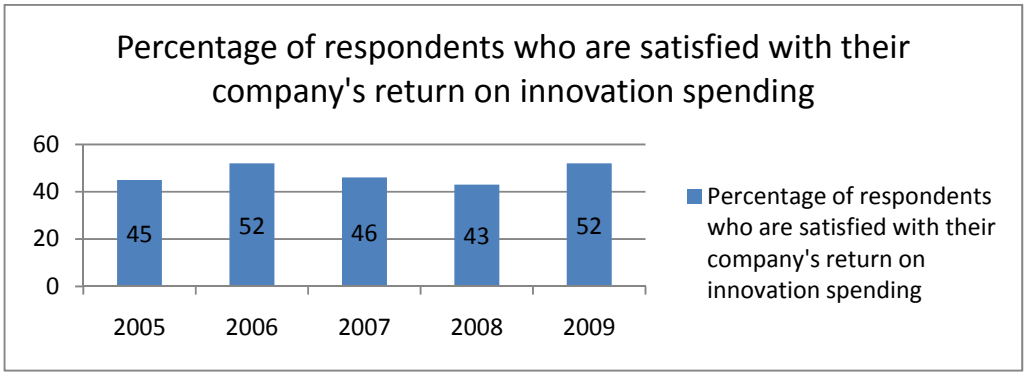
Brett Gillespey, Yan Fu

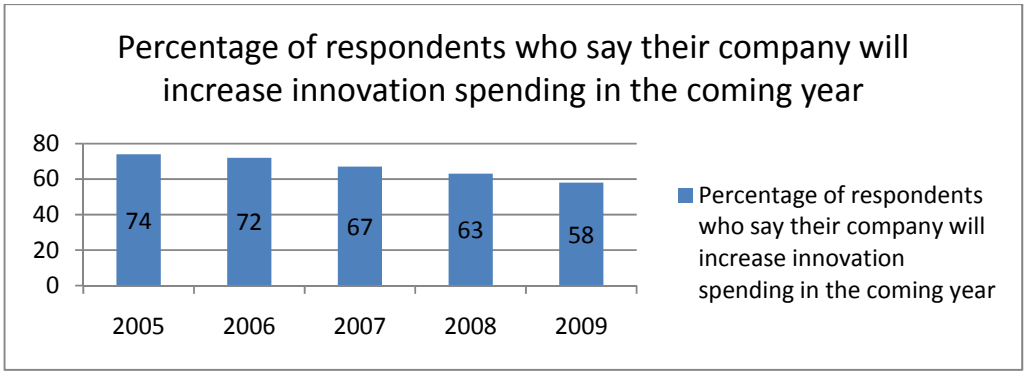
1. Introduction

There is a growing awareness that innovation is very important for countries to sustain economic growth, performance and competitiveness in the world of increasing competition.

Every year the Boston Consulting Group (BCG) conducts an annual global survey of both innovation and innovation-to-cash (ITC) processes, which covers the many interrelated activities involved in turning ideas into financial returns. The Boston Consulting Group (Annual reports, from the years 2006-2009) suggests that from 2005 to 2009, innovation has remained a top strategic focus for many companies and an average of 70% of the executives surveyed ranked it as a top-three strategic priority. Conversely though, there is a constant decline in executive's satisfaction with the financial returns on their companies' investments on innovation. In 2005, less than half of the executives surveyed said that they were satisfied with the financial returns and in 2009 the percentage was around 32% (Charts 1, 2, & 3).







(Charts 1-3, Source: The Boston Consulting Group Innovation Report 2005-2009)

In 2008 The Boston Consulting Group, the National Association of Manufacturers (NAM), and The Manufacturing Institute (MI) jointly investigated both the business outcomes of innovation and government's ability to encourage and support innovation through public policy. Based on the analyses of innovation input and output of 110 countries around the world, they published a report on The Global Innovation Index later in March 2009. This report shows that in the Global Innovation Index, Sweden ranks 10th in the overall ranking and 4th in the large country ranking.[1] A similar report which was jointly published by the Confederation of Indian Industry and INSEAD Business School has placed Sweden 3rd on the Global Innovation Rankings of 130 countries. It can be seen clearly that Sweden ranked at the top in terms of innovation and has an historical capacity towards innovation. The year 2009 was the European Year of Creativity and Innovation and as mentioned by Marcus Wallenberg (2009), one of the biggest challenges facing Sweden is how to turn the country's strong development potential into companies that drive innovation.

However, the report from VINNOVA (The Swedish Governmental Agency for Innovation Systems) and IVA (The Royal Swedish Academy of Engineering Sciences) shows that larger enterprises are no longer creating new jobs as frequently and many of the more radical innovations are generated by small and newly formed companies (2008). Even in such an innovative country like Sweden, there still seems to be plenty of room for improvement and innovation resources could have been better utilized. More specifically,

[1] Countries in the Large country ranking are the top 20 countries in the world by GDP.

for people who generally have innovative ideas at work, evidence still shows that it's extremely hard for them to convert these ideas into real innovations that can actually benefit the organizations and make the company grow. In other words, having creative ideas hasn't been a problem to this country, but turning them into company benefits seems to be were the problem lies. With immense interest and curiosity, this paper seeks to discover what's behind this, and what's hindering companies from being innovative.

Sometimes the innovation activities are hampered or even fail to get started and some employees are not as innovative as expected. This situation is not due to lack of innovation, but the result of multiple reasons we plan to discover throughout our investigation. So it is quite important to observe how much these organizations contribute to renewal. For our study qualitative research has been conducted by doing extensive interviews with 15 employees in three Swedish companies. We started out by having free conversations with them to figure out whether innovation has to do with their daily work. For those with interesting stories, follow-up interviews have been conducted to examine further what the reasons are behind a failed or successful innovation attempt. These follow up session were performed in order to understand what actually promotes and hinders an employee's motivation to be innovative. Furthermore, based on these cases, we're taking multiple perspectives in order to analyze how innovation work is actually carried out in knowledge intensive firms in Sweden, and what are the different factors affecting this process. With these findings, we're attempting to inquire about patterns companies use or could use, in order to perpetuate innovation further within these companies. Several cases have reflected the fact that innovation did exist, but were unfortunately suppressed by the companies' leadership style. The major aspects drawn from these cases fall into three parts: how the characters of employees and leadership confront and unknowingly affect the incubation of innovations; how policies are hindering innovations from moving forward; how peer-network support can help brew innovations and thus increase the chance of getting innovative ideas accepted. Furthermore, this paper generalizes these three aspects into two fundamental reasons behind all the cases: leadership styles can significantly influence the generation of innovations; depending on the variations of the driven forces, innovation processes can

have different phases, and this is exactly why different factors can play critical roles in these processes.

2. Literature Review

In conducting our literature review we analyzed literature by the most prominent researchers in the field on the themes of Innovation, Knowledge intensive firms, Innovation models, characteristics of innovative people and creativity management. A literature review is intended to focus on a particular topic of interest to you, and includes a critical analysis of the relationship among different works, and relating this research to your thesis (Galvan, J. 2006). The preceding theoretical section of this thesis is structured as follows. First, we present what innovation has been defined as in previous research, what are some of the prominent models, and what critiques of the models have been put forth on innovation. Secondly, we define what knowledge intensive firms are, what has been studied on innovation in these firms up this point, and why they are of importance for this study. Lastly, we seek to address the types of characteristics that have been previously identified in leaders that are innovative within organizations. Hopefully, through this review we will provide the reader with a theoretical foundation to understand the parameters of our thesis.

2.1 Innovation Theories

In examining innovation from an economic and organizational point of view, much of the previous research has studied the characteristics, nature, sources of the innovation, and from these studies they developed models and theories to further our understanding. The evolutionary theory studied, by Schumpeter (1912) and many other prominent researchers, has been utilized as one of the prominent theories in the innovation field. According to Lundvall (2007) the basic proposition in the evolutionary theory is that ‘the diversity of a system,’ affects its development. Consequently, in this theory, the diversity of an innovative idea and the production structure becomes vital for a new technology, company, or products success.

The contributions Schumpeter provided for the innovation field were ground-breaking, as ‘he was one of the first theorists to analyze innovation, entrepreneurism and capitalism

through a non-Darwin perspective' (Solow, R., 2007). Schumpeter acutely depicted innovation as an "industrial mutation," which "incessantly revolutionizes the economic structure from within, incessantly destroying the old one, and incessantly creating a new one (Schumpeter, J., 1912). Nelson and Winter (1982) explicate the source of innovation to a series of routines, capabilities and knowledge. Dosi (1982) ascribes to the theory that the growth of the firm and its aptitude to answer to the changes, is of four basic factors: path dependency, environment and selection, learning and routine, and core competences. It appears on the surface that no universally accepted definition of innovation has been agreed upon. With that being said, our modern views on innovation align well with what the Official Journal of the European Union defines as:

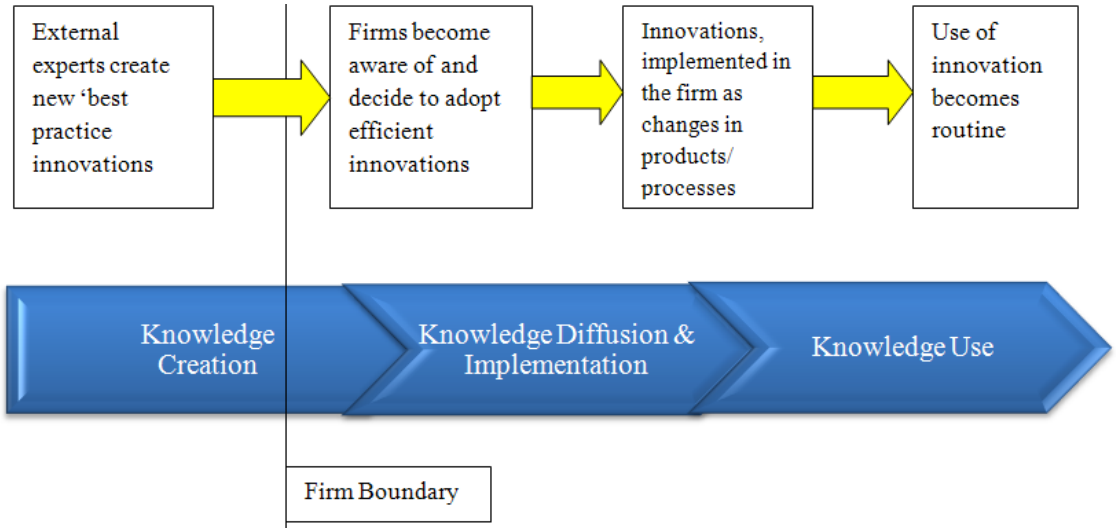
"Innovation is related to a process, connecting knowledge and technology with the exploitation of market opportunities for new or improved products, services and business processes compared to those already available on the common market, and encompassing a certain degree of risk."

(European Union Commission, 2006)

In general, this definition provides us with a summary which we believe are the main aspects of innovation. Many other definitions of innovation are already in existence (see, e.g., Edquist, 1997; Mintzberg, 1983; Nutek, 1994) but we believe this definition summarizes the key parameters of innovation very effectively. The basis behind the application of this definition is due to the emphasis it places on 'connecting knowledge and technology,' which we felt is especially relevant for this thesis. Furthermore, since we examined KIFs within the technology sector, which tends to see knowledge as its key, resource we felt this definition encompassed both of these aspects effectively.

Godin (2006) states that the linear model of innovation was one of the first (conceptual) frameworks developed for understanding the relationship of science and technology to the economy. In addition, the liner model has been one of the most prominent theories on innovation since around the 1950's. According to this model, once a new best practice has been created, and rules for its implementation have been defined, the only problem is to

make firms aware of it (Newell, Robertson, et al. 2002).Within the linear model, one does research, research then leads to development, development to production, and production to marketing (Rosenberg, and Kline, 1986). Additionally, this point of view states that innovation is likened to ‘a rational model whereby decisions are made about the adoption of new forms of best practice, based on a rational assessment of their technical efficiency over existing techniques and practices’ (Newell, Robertson, et al. 2002). Linear models have been shown to be effective in providing a roadmap for an innovation process and are one of the traditional models used for corporations. A representation of a traditional linear model of innovation is illustrated below.



-Figure 1: Traditional Linear Model by Rogers (1995)

In innovation research, there have been many linear models presented; however for our study we examined the technology push theory and market pull models as they align well with our topic of study. Theories of technical change and innovation have, by and large been classified into two expansive categories, explicitly "demand-pull" and "technology-push'" theories. The technology push theory is a linear model whereby the scientific or technological advances push a new product into the market. The technology push theory as proposed in early work by Schumpeter (the Theory of Economic Development) was itself linear and has been explained as being a science (and technology)- push type, in

that a relationship running from invention through innovation to dispersion was envisioned (Cimoli, and Giusta, 1998). In the technology push model, we observe the development of new technology as a way to open up new opportunities within the marketplace. Developing a new technology can be a long term process; subsequently the time taken for these new technologies to reach the market can be lengthy. In the market pull model, market demands draw a new product into the market (Galanakis, 2006). There exists a set of consumption and intermediate goods, at a given time, on the market, satisfying different "needs" by the consumers (Dosi, 1982). Highlighted in this model is the significant focus on the successful exploitation and incorporation of existing technology to the market demands of the customer, over a shorter duration then that of the technology push theory.

The linear model was very prominent and influential for the innovation field for many decades. However it has come under attack since around the 1950's. The notion of a universally applicable 'best practice' is in any case, misleading, innovation is highly context-specific because of the different knowledge, skills, and understandings of the social groups involved (Swan et al. 1999). Edquist and Hommen, (1999) have furthered the criticism against the model, postulating that the linear models lack of feedback paths is not consistent with practice, the understanding that not all scientific research leads to the design of innovations, and the fact that technological innovations, according to their definition, may progress without ever interacting with science. Further arguments have been made (see, e.g., Rosenberg, 1994; Watson, 2004; Godin, 2005) that assert that the model lacks any basis, that all innovations must be founded in research first. Of the many arguments thrust against this model, it does however, serve as a key theoretical concept that needs to be understand and mentioned, as it was one of the first of its kind on innovation within organizations.

2.2 Why KIFs?

In examining prior research on innovation, we see that much of the literature studies large global corporations and rarely touches on the innovativeness of small and medium sized firms. Therefore, since our study is focused on medium sized firms that could be classified as KIFs (abbreviation for 'Knowledge Intensive Firms') we choose to examine

the extensive literature on KIFs in general. Historically speaking, a large portion of the public discourse and research literature about KIFs has been constructed in Sweden. In 1983, Sveilby started writing about ‘knowledge companies’ in one of Sweden’s most prominent periodicals, and Swedish business executives and researchers have expressed strong interest in this topic ever since (Starbuck, 1992). KIFs smaller nature and prominence in Sweden furthered much of the interest of this thesis. KIFs can be loosely and preliminarily defined as organizations that offer to the market the use of fairly sophisticated knowledge or knowledge based products (Alvesson, 2004).

The core competence needed in these firms is an array of intellectual aptitude. KIFs reliance on intellectual capacity tends to have them recruit employees who have critical decision making abilities, often attained through a University degree. Alvesson, (2004) sees formal education as extremely useful in facilitating theoretical and analytical abilities essential to such organizations. Research into knowledge-intensive organizations obtained a considerable following throughout the late 1990’s and has rapidly attained a sizeable interest in the subsequent years, (see, e.g., Alvesson, 1993a; Blackler et al., 1992; Hedberg, 1990; Lindmark, 1990; Starbuck, 1992; Sveiby and Risling, 1986). Much of this interest has risen out of the reshaping of the marketplace by the introduction of computers, the internet, and the rise of professional service firms.

As Alvesson (1993) states, in addition to the original professions - physicians, lawyers and priests - an increase in occupations founded in higher education, but which do not correspond to strong criteria for being named a ‘profession,’ have taken place during recent decades. Management consulting and software engineering, for example do not qualify as recognized professions. Nevertheless, it is difficult to argue that positions such as these do not require a certain knowledge base and expertise that is not held by everyone. Although the term is widely used to describe ‘knowledge based’ firms, typically in information and communication technologies (ICT), it has been extended in the additional studies to incorporate high technology manufacturing firms in other sectors (Bell, Crick, et al. 2004). Consequently a definition that bestows an umbrella for workers of these firms continued to develop. This led to increase in people labeling themselves as knowledge workers and KIFs began to pop up at an ever increasing pace.

An additional reason of importance for distinguishing knowledge work and knowledge-intensive firms from other kinds of work and organizations, is the assumption that this kind of work, and this kind of environment, contains unique and essential qualities (Karreman, Sveningsson, et. al 2002). One can be critical of such a notion, viewing it as misleading or used as marketing fad to label these knowledge workers as superior to other professions. However, what this label does lend us is a category to understand those workers in society who are not considered ‘professionals’ (Alvesson, 1993).

Alvesson and fellow researchers, (see, e.g., Starbuck 1992, 1993; Deetz 1995; Morris and Empson 1998) have illustrated extensively how and why KIFs came into existence.

In this next section our aim is to draw out the literature that has investigated the specific characteristics of employees that work within these firms and the work conducted. Examining the characteristics of employees within KIFs, exposed in previous literature will exemplify how those that are innovative achieved their success. A key attribute of KIFs is said to be the capacity to solve complex problems through creative and innovative solutions (Hedberg, 1990; Sveiby and Risling, 1986). Work conducted in this field often has difficulty with ‘knowledge capture and standardization because there is significant reliance of the application of both explicit and tacit knowledge’ (Newell, Robertson, et al. 2002). Many knowledge-intensive firms (KIFs) score high on ambiguity, due to difficulties assessing processes dealing with complex problems, in which professional knowledge is central due to complicated authority relationships, in which the power of senior managers may be restricted (Alvesson, and Sveningsson, 2003). This would tend to imply that KIFs strive for recruiting employees that think ‘outside the box’ along with the ability to formulate creative solutions and handle vague results on an individual level.

As Newell, Robertson, et al. (2002) propose that the nature of the work, often characterized by ‘creativity and problem-solving, demands autonomy.’ Seeing as how knowledge workers possess a unique skill set, were they have to be proficient in being creative, autonomous, intelligent, organized, and confident, they frequently are considered the most valuable asset of knowledge intensive firms. In addition, the demand and requisite for autonomy in these professions can often put a manager in place

where they are not in a position to control the employees work. Alvesson, (2004) ascribes to the notion that the 'high degree of customization and innovation in KIFs make traditional management principals such as standardization, routinization, and supervision difficult to apply.' It is perhaps more appropriate within a knowledge-work setting to suggest that 'management's role is to provide conditions that will 'facilitate knowledge work' (Newell, Robertson, et al. 2002). Along with their distinctive managerial practices, KIFs also tend to have flatter, and less hierarchical organizational structures then other firms.

Another unwritten rule that should be taken into account when dealing with KIFs matters is the Jante law. The Danish-Norwegian author named Aksel Sandemose (1899-1965) firstly enacted Jante law. He depicted the rules of behavior in a fictitious city called Jante in his novel *En flykting krysser sitt spor (A refugee is crossing his trail)* (1933). He described Ten Commandments[2] that are known as Jante law and the overall theme of it is: you are not better than anybody else. The Jante law is well-known in Scandinavia and it suggests the acceptable behaviors by emphasizing how important it is to know your place in certain circumstances. Under the influence of Jante law, people are self-disciplined and a little bit conservative when it comes to remarking on something new. Employees in KIFs are mostly well educated and have strong self-esteem. Considering this along with Jante law, these characteristics of the employees in KIFs may affect the generation of innovative ideas and the leadership styles adopted.

[2] The ten commandments are:
1.Don't think you are somebody
2.Don't believe that your are as good as us
3.Don't believe that you are wiser than us
4.Don't believe that you are better than us
5.Don't believe that you know more than we do
6.Don't believe that you are more than us
7.Don't believe that you are capable of anything
8.Don't laugh at us
9.Don't think that anybody cares for you
10.Don't believe that you can teach us anything

2.3 Knowledge Management and Innovation

In examining KIFs in regards to how they manage knowledge workers, it is also imperative for our study to emphasize what previous research has revealed about how these organizations cultivate and promote innovation. Many researchers emphasize that knowledge development is 'dependent on social interaction and on broad areas of contact with knowledgeable others' (Alvesson, 2004). Consequently, this seems to highlight that to facilitate knowledge development within these firms employees need to be more adapt at developing innovative ideas then other less knowledgeable intensive fields.

A favorite theme for authors writing about functionalist knowledge and organization is that social networks and interaction between peoples institutions that are 'objectively/ experts or knowledge-intensive lead to more knowledge and innovation (Alvesson 2004). This illustrates that KIFs naturally would be expected to be more innovative than other institutions, by way of their heavy reliance on highly intelligent employees working with ambiguous problems. For instance, some firms in engineering design are criticized by their more innovative peers for 'pulling the old drawers off the shelves' (Lowendahl, 2005). KIFs are often characterized as 'embarrassed,' to reuse designs, proposals, or solutions for new clients. Lowendahl, (2005) ascribes that for KIFs, innovation and creativity is critical, and the reuse of old solutions feels akin to cheating. Consequently, previous research would imply that an intensification of innovation for these firms assures more ambiguity in the delivery process. Furthermore as reported in the surveys by (Cohen and Klepper, 1996; Klette and Kortum, 2002) firm size and expenditure per employee has been found to be a highly significant determinant to engage in innovation. This further alludes to the fact, that the size of innovation investment expenditure per employee has positive correlation on the success of innovative ventures as well.

KIFs of smaller sizes have still shown extensive success with innovation as long as the expenditures allocated to each employee are sufficient. Janz, Loof, et. al. (2003) established in the course of their empirical studies between Sweden and Germany that a firm's innovation performance is slightly higher in firms with a stronger orientation on the global market. As mentioned earlier this idea advocates, that exposure to diverse

markets can help KIFs perpetuate innovation within their organization through exposure to new ideas or practices.

There exists many approaches on how to spark innovation through knowledge management techniques (see, e.g., Hansen, 1999; Nonaka 1991; Snowden, 2002). For our study however we decided to narrow it down and review the two approaches we felt were most relevant, which were the networking and community approach. Within these approaches they have broken down knowledge management into two subcategories of innovation. The first of which is agenda formation in the networking approach, which pertains to knowledge acquisition. That is the initial knowledge acquisition of new ideas from sources of external to innovating unit (including other firms and / or other units in the wider organization (Newell, Robertson, et al. 2002). The most important thing seen in this approach is 'networking in order to achieve an advantage over competitors by being aware of new advances.' Newell, Robertson, et al. (2002) ascribe to the idea, that the dominant metaphor for knowledge management is a network that connects to widely dispersed sources of knowledge. Knowledge is therefore considered to be located externally to the KIF and through knowledge acquisition the envisioned innovative ideas can be captured. However, as shown by Granovetter, (1973) the development of weak ties may be particularly critical, because fragile ties provide access to novel information by bridging otherwise disconnected groups and individuals.

The second approach reviewed was the community approach which places its emphasis on selection and implementation. The selection and implementation segments necessitate that knowledge acquired through networks needs to be further developed, shared internally and blended with locally situated knowledge about organizational practices and processes (Scarbrough and Corbett, 1992). The community approach relates well to what has been stated by, Janz, Loof, et. al. (2003) in regard to engaging with the global market to expand in knowledge management and innovation. Newell, Robertson, et al. (2002) believe that through the community approach, that encouraging knowledge-sharing (including tacit knowledge) amongst and between teams and individuals will aide in developing innovative ideas.

There have nonetheless been critiques on this approach, for example Weick, (1990) sees that the development of trust and shared meanings and understandings can be hard to garner in organizations such as KIFs, due to the amount of autonomy employees have. Further criticism has been put forth by Newell, Robertson, et al. (2002) on KIFs who criticize that ‘they rely too heavily on those processes to be done through technology.’ They perceive it as difficult to encourage effective knowledge sharing, ‘especially where membership cuts across organizational and geographical boundaries.’ In spite of this, the approach does paint a good picture as to how KIFs, which subscribe to this theory, can be effective with innovation through shared understandings. During the course of knowledge sharing, each employee's own understanding and ideas can lead to an elevated amount of diverse innovative solutions. These approaches and critiques illustrate that no ‘one approach fits all,’ to knowledge management. It further suggests, that the best methodology is to develop ‘approaches and strategies that are particularly tailored to different tasks and purposes of the particular organization’ (Newell, Robertson, et al. 2002).

In the previous section, we gave examples in the literature of the different approaches to managing knowledge for innovation. For the last section, we believe it is imperative to have an understanding of what previous literature has concluded in regards to formulating approaches for managing knowledge for innovation through leadership. The previous research we studied and used for our review was based on an understanding that the features of the social context can have a heavy influence on mediating the innovation process. The three prominent set of factors that influence knowledge management have been attributed to cognitive factors, social factors, and organizational factors. The cognitive factors influencing innovation knowledge management have to do ‘with the distribution of knowledge, information and perceptions and beliefs’ (Newell, Robertson, et al. 2002). Further examples of cognitive factors are feelings, intuitions, preconceptions and understandings, which characterize the aspects people, carry into every organization.

There is conceptual and empirical evidence to believe that, ‘in organizational settings, attitudinal components mediate the influence of external variables on behavioral intentions,’ (Le Bon and Merunka 1998). Newell, Robertson, et al. (2002) ascribe to the

idea, that the importance of the user's own knowledge and beliefs in actively interpreting and redesigning innovation is unaccounted for by the linear model, and thus puts emphasis on the importance of accounting for cognitive factors. In looking at the organizational factors of innovation it has pertained to the organizational politics and perceptions in different parts of the organization (for example, across levels, functions, and occupational groups (Swan, 1995). Furthermore, this type of innovation places importance on alterations in and amid a variety of organizational aspects of functions of the firm, including research, industrial relations, worker health and safety, and customer and community relations.

Engaging in innovation processes, that involve changes in technology and organizational processes, often disrupt or threaten the established power and authority structures, and may generate conflict and resistance (Newell, Robertson, et al. 2002). Therefore, remaining conscious of politics and power structures currently within the organization, remains vital to the success of knowledge management proposals on innovation. Lastly, the social factors state that 'critical to innovation are social relationships and networks through which relevant knowledge can be acquired, shared, and developed through which, support for innovation can be mobilized (Von Hippel, 1988). By means of the social factors concept, the development of strong global and local networks and social relations is of utmost importance. Lundvall, (2010) stated that many studies of success and failure in innovation have concluded that the capacity to communicate and interact with a variety of external agencies is one of the main ingredients of success. Furthermore, Perez and Soete, (1988) demonstrated in their cross-cultural study (between Third and First World countries), how extensive the cost disadvantage of firms is in the Third World, which is lacking any such national networks. Social factors therefore, have been shown to play a vital role in the success for any innovative venture within KIFs or other organizations. Understanding and addressing all aspects covered under the cognitive, organizational, and social factors of knowledge management are dynamic, complex, ambiguous and hard to account for in organizations. Nevertheless they are critical in 'aiding and mediating attempts to manage knowledge for innovation regardless of what approach (networking, cognitive, or community) is taken' (Newell, Robertson, et al. 2002).

2.4 Theories on Leadership Styles

There exists many theoretical concepts on how to spark innovation with leadership in organizations, however for the scope of our study we dealt with two of the most prominent styles labeled as either transformational or transactional. We choose to build our decision on applying these two styles on the premise, that these approaches are effective by placing the main emphasis on the needs of the subordinates over that of the leaders. Bruce Avolio and Bernard Bass, (1985) coined the terms transformational and transactional leadership styles, which we determined bared the closest resemblance to what was or was not exhibited by managers in our study.

In order to understand what these two leadership styles contain, it is first imperative to provide some background information as to what these methods pertain too. Defining these terms, will then aide us in supporting what we found in our research, and describe how and why these styles are relevant for our study. In general, Bass (1985) defines transformational leaders as those who change their culture, by first understanding it and then realigning the organization's culture with a new vision and a revision of its shared assumptions, values, and norms. This type of leadership is believed to be one of the features that propel subordinates' innovative activity within organizations. Bass's (1985) theory of transformational leadership is derived from Burn's (1978) qualitative classification of transactional and transformational political leaders (Bass and Avolio, 1993).Transformational leaders strive to integrate creative insight, persistence, energy, intuition and sensitivity to the needs of others to "forge the strategy and culture alloy" for their organizations (Bass and Avolio, 1990). Transformational leadership consists of three important factors (see, e.g., Howell and Avolio, 1993; Bycio et al., 1995; Koh et al., 1995). These factors and their definitions are: charismatic leadership: the leader respects and inspires subordinates, individualized consideration: the leader pays attention to and supports subordinates, and intellectual stimulation: the leader enables subordinates to improve and refresh their understanding and creativity (Bossink, 2004). Researchers who measure and determine the degree to which managers in organizations facilitate their subordinates to be innovative, often use the transformational leadership style when describing this behavior.

Comparatively speaking in examining transactional leadership, it can be characterized as ‘leaders who develop exchanges or agreements with their followers, pointing out what the followers will receive if they do something right as well as wrong’ (Bass and Avolio, 1990). Furthermore, this style of leadership is established on the premise that subordinates within an organization are motivated through a system of rewards and punishments. Within transactional leadership there consist two expansive groups classified as, contingent reward and management by exception. These two factors identified by Bass as composing transactional leadership differ with respect to ‘the leader's activity level and the nature of interaction with followers’ (Bass and Avolio, 1993). Contingent rewards are based on the premise that leaders clarify expectations and establish rewards when employees meet those proposed expectations. Management by exception on the other hand refers to the degree to which the leader takes corrective immediate or delayed action on the basis of results of leader–follower transactions (Oke, Munshi, et al. 2008). Differentiating between these two factors is based on the distinction among ‘active and passive management by exception, which is primarily established on the timing of the leader's intervention. (Bass and Avolio, 1993). Comparing these two together we see that ‘the transactional leader lives within the culture as given and the transformational leader changes it’ (Bass, 1985).

In conclusion through our extensive literature review our goal was to attempt to illustrate the amount of diverse and dissimilar innovation approaches and theories that exist on innovation. By providing the theoretical background for the aforementioned theories it is our hope that the reader will be able to comprehend the links and conclusions we obtained in the preceding sections. Additionally the aim of the literature review was to institute a foundation for the reader to understand what prominent researchers have established previously in the area of innovation. It important to note that many of the researchers referenced are the original authors who established the theories, so one should be critical of any biases that may be introduced towards the applying their content used. In the next section we move towards exhibiting what practical methods were utilized in conducting our research approach.

3. Methodology

In this section, the practical procedures of our study will be presented to illustrate how we obtained our results. The choices we made concerning which method was used should be evaluated based on the purpose and intentions of our study. It is our hope that the information acquired in this section would be able to be replicated in any future research. Methodology according to Strauss and Corbin (1998) is "a way of thinking about and studying reality." In most research work, studies are performed either by means of a quantitative or qualitative research approach. However, 'the choice between the different methods should depend on, what one is trying to find out' (Silverman, 2000). For our topic under study, we decided to go with the qualitative method as our findings are based on empirical findings within the field and in our attempt to gain insight on unquantifiable measures pertaining to variables that occur in the social world.

Qualitative methods pertain to starting from the perspective and actions of the subject studied, while quantitative studies typically proceed from the researcher's ideas about the dimensions and categories which should constitute the main focus (Bryman, 1989). A further reason is that we strived to uncover findings that could shed light on people's daily work environment, and how their experiences of the workplace hindered or fostered innovation within their companies. Furthermore, qualitative research is primarily concerned about peoples´ lives or experiences, lived behaviors and feelings, as well as organizational functioning (Strauss and Corbin, 1998). It also has characteristics of achieving a 'deeper understanding of phenomenon and closeness to the source of data' (Strauss and Corbin, 1998). Therefore, for our study a qualitative methodology was regarded as the most logical choice.

3.1 Research Philosophy

Proceeding in this next section, is the philosophy in which we aligned our perspective with while conducting our research. It is in our belief that it is essential to depict the philosophical theories on how exploration and advancement of knowledge was viewed in our research process. The importance of research philosophy, as stated by Saunders, et al. (2009) contains important assumptions about the way in which you view the world, and will underpin your research strategy and the method you choose as part of that strategy.

The prominent and main research paradigms are broken down into three philosophical groups: Epistemology, Ontology, and Axiology. Saunders, et. al, (2009) states these three paradigms can be divided into four separate philosophies such as: realism, positivism, pragmatism, and interpretivism. The first of which is realism as described by Bryman and Bell, (2007) is the notion that there is an external social reality that can be accessed by the researcher. Saunders, et. al, (2009) further elaborates that the essence of realism is that what the senses show us as reality is the truth, 'that objects have an existence independent of the human mind.' The main point is that data collection in this philosophical stance is based on observations of those under study. An additional paradigm is positivism which shares some of the similar characteristics of realism as they both 'assume a scientific approach to the development of knowledge' (Saunders, et. al, 2009). For positivism, all knowledge comes to us as single sense-data, and theories are just human-made linkages between the data (Alvesson and Skoldberg, 2009). Positivism examines the researcher as independent of the variables collected and it views research conducted without binding to pre-developed values or categories. For modern positivism, what is observable includes what is measureable or possible to register through some kind of instrument (Braithwaite, 1953).

Pragmatism is defined as a 'social utility, social control as an outcome of research, which constitutes the criterion of the truth (Alvesson and Skoldberg, 2009). The researcher examines both an external perspective and adopts several views to answer a research question to a fuller extent. Tashakkori and Teddlie, (1998) argue that pragmatism is intuitively appealing, largely because it avoids the researcher engaging in what they see as rather pointless debates about such concepts as truth and reality. Lastly, interpretivism advocates that it is necessary for the researcher to understand differences between humans in our role as social actors (Saunders, et. al, (2009). In this perspective, it is often applied to studies in the areas of organizational research and business management, due to the uniqueness and complexities that prevail in these environments. The main challenge here is to enter the social world of our research subjects and understand their world from their point of view (Saunders, et. al, (2009). For the reason outlined above we adopted an interpretivism perspective as our study pertains to examining the social world from the eyes of the employees within their natural work environment. Since our study

examined innovation from multiple perspectives with employees at different levels in their careers, we felt this approach was the best suited. A further reason is shown through what Biggam (2008) states, that a 'interpretivistic position is normally applied together with qualitative research methods, such as semi-structured interviews, which aligns with the research parameters we laid forth for our research study.

3.2 Research Approach

In reviewing the various qualitative research approaches, there have many been theories for which one could follow under a qualitative study, such as phenomenology (see, e.g., Van Manen, 1990), narrative analysis, (Leiblich, 1998), discourse analysis (Potter and Wetherall, 1994), grounded theory (Strauss and Corbin, 1990), and social constructionism (Berger and Luckmann, 1966). Along with the aforementioned theories, some of the two most frequently used scientific approaches are the inductive and the deductive approach. In the deductive approach, research proceeds from a general rule and asserts that this rule explains a single case (Alvesson & Skoldberg, 2009). This approach starts with a theoretical area of study and tries to draw conclusions through empirical evidence either in support or against it. Deduction is extremely useful for seeking the validity of study, when preconceived expectations have been made about the future findings. However, for this particular study the most suited research approach was that of the induction theory, as our area of focus, is to further analyze how innovation is conducted and influenced in knowledge intensive firms in Sweden. The majority of the literature and theories reviewed tended to based on a large corporation context; so we felt that an inductive approach, rather than a deductive one was warranted.

Induction as defined by Alvesson & Skoldberg, (2009) is the analysis of the empirical fact(s) that may very well be combined with, or preceded by, studies of previous theory in the literature; not as a mechanical application on single cases, but as a source of inspiration for the discovery of patterns that bring understanding. This approach has proved to be most effective when researchers are in search of a problem or area under study that they intend to seek the answer too through empirical research. The inductive approach is associated with several forms of qualitative data analyses, specifically the grounded theory (Strauss and Corbin, 1990). The induction theory's similarities to the

aforementioned grounded theory, are stated by, Alvesson and Skoldberg, (2009) as it is derived from data, developed inductively, and Glaser and Strauss argue strongly against a 'logical deductive' view, which seeks instead to start from theories divorced from reality. The theory also shares some of the general qualitative data analysis parameters as described by (see, e.g., Miles and Huberman 1994; Pope, et al. 2000; Seidel, 1998). Of the many theories similar to the induction theory for our study, we decided to operate and label our research as inductive, based on our belief that nothing outside the topic under study should limit our research, or the way information is collected and analyzed. Regardless of the benefits presented, the induction theory does have its limitations as nearly all theories do.

Firstly it is stated that, 'one may not see how disparate variables fit together or relate to each other. In addition Hansen, (1958) has gone as far as to reject both induction and deduction models. In his view, induction is unsatisfactory due to the fact that 'new knowledge does not constitute simple summaries, or condensations, of data, but an explanation of the data' (Hansen, 1958). He further elaborates on the fallacies of deduction, as it gives a faulty picture of the research process, since it presupposes that scientific discoveries happen through airy speculation, which remains to be tested through empirical analysis. The induction and deduction theory's flaws are understandable, as no one theory can encapsulate all the necessary parameters within the wide range of research studies. Therefore, we rationalize our application of the inductive approach based on our focus to: gain a better understanding of our designated research context, discover 'something new,' which could contribute to future theories on knowledge intensive firms. In the final analysis, these findings could help lend more to the research field and potentially lead to further studies where future findings could provide additional evidence in support or against our study.

3.3 Research Design

For our area under study, we proposed to gain insight on our topic through multiple interviews and case studies, to garner the insight needed for our conclusions. For the interviews we conducted, the names and companies have been changed to respect the confidentiality requirements of the organizations. In developing a strong rapport with

certain employees we were able to further extract the experiences and feelings they possessed about their current company's role in regards to innovation. Through the process of developing a strong rapport we decided to pick out those interviews that were most relevant and detailed to form concentrated analysis and case studies to develop deeper understandings of the situation.

A case study as defined by Stake, (1998) is the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances. Some prominent examples of case studies are Pettigrew's (1988) study on strategic change and competiveness between two firms, Eisenhardt & Bourgeois, (1988) study between eight microcomputer firms, and Burgelman (1983) study on six internal corporate ventures within one major corporation. In proceeding with case studies they can also be conducted in multiple ways, either by following a single case or involving multiple cases, which may contain several overlapping levels of analysis. Furthermore Yin, (1984) ascribes that case studies can employ an embedded design, which has multiple levels of analysis within a single study. Methods used while conducting case studies are typically distinguished with techniques such as interviews, questionnaires, data collection, observations, and survey's. Case studies have dealt with a level of criticism towards the validity of its application in practice. Stake, (1998) sees problems in case studies attempt 'to try to do too much with a case study to make it both intrinsic and instrumental, and to make it serve too many audiences. Further criticisms have been made by Yin (2003) 'stating the method is a weak form of social science research.' Nevertheless, what led us to this approach is the extensive prevalence of the theory in social science research, and to gain a deeper understanding through extensive interviews about a select group of subjects.

3.4 Interview Questions

In understanding how we carried out our study, it is also imperative to understand the way in which we developed our questions and proceeded with them in the field. The reason for understanding this process is due to the manner in which we conducted our study which was done through case studies. Methods used while conducting case studies are typically distinguished with techniques such as interviews, questionnaires, data

collection, observations, and survey's as mentioned above. In preparing our interview questions, we set out to develop the majority of them in association with our research proposal and methodology. The questions were intuitively based on what was anticipated out of the semi structured interviews.

At the outset we developed questions that were allocated into broad categories relevant to our area of study to provide a framework for how to formulate relevant questions. Initially, we met with our participants at three different companies located within Southern Sweden. In total, we interviewed 15 employees which equated to five from each company in order to maintain balance throughout the study. The empirical data of our research study was to be obtained by way of unstructured open ended interviews consisting of the pre-interview, second interview, structured interview, and the post interview follow up. Those who participated in our study were selected partly on the grounds of availability, previous work experiences and those who held roles requiring them to be innovative, either directly or indirectly within their current company.

Concerning which participants we were to examine under our study, the selection process is of utmost importance since it since they are considered the principal source, in empirical research (Bryman and Bell 2007). If one were to replicate this study the respondent's experiences and standing in the organizations are key aspects in illuminating why a particular response is given. In this perspective the respondents needed to be selected with great care. The backgrounds of the primary participants under study will be elaborated in more detail in the forthcoming our study section. The companies, in which these employees worked, could be classified as medium sized knowledge intensive firms. Upon meeting, the participants we had a general introduction meeting going over the parameters of our study and then proceeded to have the participants engage in describing their background as well as their experiences up to this point in their careers. Our qualitative interviews were semi structured with a broad set of 15 questions and then further questions were developed while in session with respondents, as the conversation began to advance after the first session. The first session was around 30-45 minutes per participant and was conducted during a normal work week.

The interviews we structured were left fairly open in the beginning, due to the fact that our study was based on induction methods. We also structured our first engagement in this manner to try and build a strong rapport were the employees felt comfortable confiding in us, so through our follow up sessions the trust began to develop. After our initial meeting we attempted to develop questions that started out with fairly broad based categories relevant to innovation to inquire into which employees had the most vivid experiences with innovation. During our second session with the participants we narrowed and refined the majority of our questions to a set of twelve that dealt with innovation and leadership within their current company. The main reason behind this was our interest in pursuing an understanding of the dynamics around the experience employees had directly with innovation. The second meeting lasted from 45 minutes to an hour. In moving on to the third discussion, we strived to establish a narrower focus on the employees direct experiences with innovation and any examples that stood out over their time with the company and with their superiors. This required us to develop follow up questions for areas where details were vague. In these additional questions containing specific examples it ultimately led to a more vivid and relevant depiction of the situation. The third session was around an hour long and was aimed at structuring it around a lunch with the participant in hopes that the conversation would be more open and natural.

Throughout our concluding sessions we began to focus on three specific cases, within three different companies that our participants had experienced. The reason for narrowing our focus is due to the fact that the examples provided, gave us a copious amount of detail and insight. There also were instances in our case studies where multiple employees experienced the same event, consequently lending us valuable insight into the situation from multiple perspectives. The narrow focus developed while conducting our interviews also shaped much of the basis for examining the situations through a case study perspective. Those that participated in the extensive case studies were three from company one and one from company two and company three respectively. The last sessions with these specific cases lasted around an hour each. Of the participants that were not part of our detailed case study, the concluding sessions with them were aimed at clarifying previous answers, having them add anything they forget, and then any other question we felt relevant. These last follow up sessions lasted roughly around 30 minutes

each. For all our interviews, a tape recorder was used in order to ensure transcribing was accurate and analysis could be reflected upon.

3.5 Quality of Empirical Research

Within this next section we turn to the reliability and validity around the empirical findings we established. The importance of this section is to ensure one can evaluate the quality of the study in order to cultivate credible results. In research, determining the reliability and validity behind the data obtained is vital for all research studies. Reliability and validity's application and confirmation through research are often best conducted within quantitative research. Both reliability and validity are essentially concerned with the adequacy of measures, which are most obviously a concern in quantitative research (Bryman and Bell, 2007). The reasons behind the difficulty in applying it through a qualitative approach are the problems in measuring variables in the study.

Validity as defined by Bryman and Bell, (2007) is concerned with the integrity of the conclusions that are generated from the pieces of research.

In extending validity's emphasis on generating conclusions from data it is relatively hard to establish with semi structured interviews, as was the case in the method we pursued for our study. Internal validity is concerned with the question of whether a conclusion that incorporates a causal relationship between two or more variables holds water. Validity of this nature is hard to establish with research based on induction and case studies, seeing as though the findings are up to the interpretations of the observer. To remedy the questions around validity of our study, a prolonged investigation longer than three months could command a better establishment of a cause and effect relationships. Selection bias of the industry and employees under study could also be an aspect that our study may have compromised the internal validity of the results obtained. External validity is concerned with the question of whether the results of a study can be generalized beyond the specific research context (Bryman and Bell, 2007). Since we relied on small samples and case studies for our observations, generalizing our findings to other larger contexts could give misleading comparisons. The Hawthrone effect could also skew the results as this theory states that 'the psychological effects that arise out of mere participation in interviews can affect the way in which questions are answered'

(Cohen, et al., 2007). To combat this, if the research were conducted outside the controlled study in a natural environment, more reliable and authentic answers may have been achieved.

Reliability on the other hand is concerned with the question of whether the results of a study are repeatable (Bryman and Bell, 2007). An additional aspect outlined in reliability is the necessity for consistency in the way methods are conducted in the field. This runs counterintuitive to what our approach studied, seeing as though humans are not static variables that are all similar. Given that our study was performed through qualitative, semi structured interviews, the conversations garnered are fairly subjective upon interpretation and thus may be difficult to replicate similar findings in the field. External reliability refers to the degree to which a measure is consistent over time (Bryman, A, 1989). This can come under question through our study due to the subjectiveness behind the findings, the relationships the researcher established with participants over the course of our multiple sessions, experience and techniques of the researcher performing the interviews, and sequence of when questions were posed.

Another issue pertaining to reliability within our study is the internal reliability of our study. Internal reliability as defined by Bryman, (1989) refers to the degree of internal consistency of a defined measure. Reliability of this nature could be threatened in qualitative studies by the psychological conditions of those under study. Since our study is concerned with humans, they of course have exterior experiences happening in their lives inside and outside of work. It is obviously impossible to freeze a research situation; consequently this mere factor alone would pose a threat to the reliability of the majority of qualitative studies. This could directly affect the internal reliability of our study and further studies based on the notion that feelings are not always checked at the door when employees arrive at work. Therefore, the employees mind state during each session could fluctuate and thus the answers obtained could be altered depending on the day and time of the interview. Furthermore, if the researcher’s values or beliefs about the study varied from ours, the findings could subsequently be altered as well, due to the preconceived beliefs we all possess.

In understanding why we used the collection methods for our study, it is important to realize that no one data collection method is flawless. Each approach has its own specific advantages and disadvantages depending on the situation in which it is applied. Since our study was based on induction methods and semi structured interviews between multiple organizations, the answers provided helped represent the different perceptions and experiences needed for examining our research parameters. An additional motive is due to the flexibility of this approach in adapting to the development of the conversation with the participants. Furthermore, through an induction and case study approach it allows us to scrutinize deeper into questions that were of significant importance for our topic. Since our area under study has received little attention in previous qualitative studies, this aided us in clarifying connections between variables.

4. Our study

To discover how innovation is conducted within knowledge intensive firms in Sweden, the authors made a number of interviews with employees from three different companies. Among all the three companies under study, one in particular pertaining to a high-tech IT company, is the most comprehensive and representative for our topic. The interviewees responded with interest towards our topic, which further enabled the authors to establish follow up interviews over several sessions. Furthermore, a particular case study of a technical consulting company provides us with insights into innovation processes from another vantage point

4.1 Organizations Under Examination

In order to gain a better understanding about those under our study, it seemed important to depict what types of companies the employees worked within. Companies that were chosen for our study all operate within the information technology and management consulting sector in order to satisfy our desire to examine comparable knowledge intensive organizations. These particular companies all have a heavy focus on innovation and staying ahead of the curve with cutting edge technology. Company one which is a medium sized high tech electronic device company located in Lund, Sweden. They have a wide range of expertise ranging from mobile devices, home electronics, and computers. This company takes pride in being extremely progressive with new technology

developments in all sectors it operates within. Company one has numerous locations worldwide and in the branch in Lund there are around 500 employees. The organization's configuration could be classified as a decentralized power structure. Employees are pushed to ask questions, and chains of command and titles are de-emphasized. The overall atmosphere of the employees seemed relatively pleasant while we were conducting interviews onsite. Our interpretation of this atmosphere was based on our observations onsite. There seemed to be a lot of collaboration when it came to work tasks, and employees had stated they had strong relationships with coworkers and they enjoyed working with the employees within their departments.

In turning to company two they are a relatively medium sized IT firm specializing in management consulting, IT implementations, technical staffing and technical training for corporations. This company has multiple locations around the world, for our interviews we met with employees in the Malmo branch. Organizational structure wise, the company is similar to that of company one. It is an open atmosphere with very few walls, a decentralized chain of command, and employees seem to thrive off the collaborative nature of the office. In total, there are around 55 employees working within the branch with a wide age range. Similar to company one, the employees seemed to be in high spirits when interacting with us and observing them in their natural work environment.

Lastly, company three failed to share some of the previous similarities company one and company two possessed. Company three is a medium sized company as well, with multiple offices in Europe and the U.S. The office under study was located in Malmo, Sweden with an office of around 150 employees. Company three's area of expertise is in broadband communications, networking services, and communications equipment supplies. The atmosphere permeating throughout this company was very hierarchical, employees seemed relatively unhappy with their work, and manager's lack of communication with employees seemed to foster an exceedingly un-collaborative atmosphere. In depicting the characteristics of all the companies under study it is our aim to give the reader and future studies all the details necessary to replicate studies and to advance a more complete understanding of the findings that we garnered.

4.2 Case Study One: The story of Daniel and Jonas

Daniel (male, 29) started to work in the software development department of company one since the beginning of 2007, writing computer software that was used by the company's customers around the world. It did not take long for Daniel to realize that there's quite a lot of room for improvement in the technologies they were employing in their system, since it involved numerous amounts of repetitive manual work and unnecessary human interaction. After learning what Daniel was responsible for at work, his brother started to call him the "system nanny." This comment stimulated Daniel to look into any other technologies that could possibly replace the one they were currently using.

Jonas (male, 41) is an absolute software junkie, who loves programming and always spends a lot of his spare time reviewing the latest cutting-edge software technologies. After working with Daniel for awhile he realized that it was always seemed to be the two of them talking about work and inspiring innovative IT material over lunch or coffee breaks. Through their frequent conversations, they began to notice that they had ideas about changing and improving the old system.

They decided to put their heads together to search for an ideal substitution for the current system. In about three weeks, they narrowed down all the possible ideas to one, which they determined was the most cutting-edge technology at the time and sounded almost too advanced to be accepted by his coworkers. Considering how easy the technology was to implement, they thought a demonstration would reveal the advantages the system possessed.

Daniel and Jonas felt extremely confident and satisfied with what they had accomplished and believed once the system was brought to the attention of the managers they would immediately be on board. They then called a meeting without hesitation for all the people in the department, including the manager, (who's the only possible sponsor for any new projects) the system architects and function team leaders who have the final say when it comes to technology-related matters. It is also worth mentioning that this small group of people, who were still doing further development and maintenance of the technology in the system, was also in attendance.

During the meeting, Daniel and Jonas spent half the time explaining existing problems of the old system and what possible aspects could be improved upon. However, the responses from people were at minimal as people appeared to be afraid to speak their mind. People weren't saying anything either positive or negative about it; they just remained in silent.

> *What do you think is the reason for the silence?*
>
> *Daniel: I think there are maybe two reasons. First is that people were too used to the system to notice any inconvenience or potential problems. The second one is not about the technology itself, it's just that the development team were right there during the meeting, and people would not want to step on someone else's toes.*

In the second half of the meeting, they demonstrated the innovative work they achieved in the system with this new technology. Then people, mainly the development team of the technology in use, showed their skepticism by asking numerous questions regarding implementation details and potential issues within the system. In the end, only one of the system architects added a few simple comments, which was that he believed this indeed sounded like a cutting edge technology. However, he could not see any qualitative changes this could bring to the old system. He further elaborated, stating that it seemed to be a significant amount of work to get this up and running, which might not be worth it, considering the limited improvements it provided. The department manager was also in agreement with the system architect, with his expression of similar concerns. He also thought that the amount of changes and pros and cons required to get the new system up and running would be hard figure in terms of cost effectiveness. He believed there would be more work and time involved in order to consider all the parameters thoroughly. Furthermore, he did not express his personal inclination towards this new technology; nor did he support further investigation on whether there should even be any more work on it at all.

Daniel felt extremely frustrated and angry after the meeting. It appeared to him that there was a total lack of interest in this new technology and people acted as though the

proposal had nothing to do with them. On the contrary, the managers were unbelievably active in attacking their proposal. Daniel felt like the whole proposal process was becoming much more of a burden that was forcing him to act like a salesman, which was the complete opposite to what he anticipated before the meeting. Jonas and Daniel always knew that they would not get everyones support. Still, they had hoped that people would at least be positively involved in discussing the feasibility of using it, and that the manager might be supportive in doing some further research. Unfortunately, things did not get any better and the proposals benefits for the company were completely lost.

In a nutshell, no one was looking at the positive side of the proposal, especially the manager and the architects who had a bigger influence and greater decision-making authority. Basically, Daniel and Jonas were fighting for proposal alone helplessly with no support provided.

An interesting development occurred, that further exacerbated Daniel and Jonas frustration the following year. In the spring of 2008, the department manager hired an external technical consultant to do some investigation on what prospective and innovative technologies the department could use in the future. It took the consultant around one month to come up with such a report, which in turn was exactly the same technology Daniel and Jonas proposed the year before to the department manager. A meeting was called shortly after this report was completed, to inform people that the budget for implementing this technology in the current system was in place and things would be started up as soon as possible. When Daniel heard of this new development he decided to quit his job, as he felt his passionate work had been disrespected and he knew it would be extremely difficult for him to get along with his manager in the future.

Jonas, on the other hand held a somewhat different view on this situation. When he found out that the technical consultant proposed the same technology as Daniel and he did a year ago, he was not as frustrated as Daniel. This was due the fact that since he was “totally blown away by the technical report the consultant had written.” Jonas believed that the report was very thorough and in-depth and it actually revealed to him the amateurish level of their previous proposal

So this new situation helped you completely understand how your colleagues behaved back then?

Jonas: Well, I understood how overwhelming everyday work can be for a manager working in this turbulent industry, as you know, I am an elderly staffer, and the manager probably really didn't have that much effort or time to consider our proposal. On the other hand, if the manager had showed a little bit more encouragement or interest back then to our proposal, I believed I wouldn't have lost my interest and would have absolutely loved to carry out more work to make a better proposal and maybe our department didn't have to wait for a whole year to implement the new technology.

According to the department manager Peter (male, 41), the reasons that he didn't take the proposal Jonas and Daniel made in the summer of 2007 was that he did not perceive any need to improve the system.

Peter: There wasn't really any problem with the system back then, because everything was going pretty fluently and we had always delivered our services to the customers on time with quality. Also, it's basically up to the system architects and function team leaders to decide whether we should take it or not, and they didn't say yes to this either. Apart from that, budget was a problem as well, since we absolutely had no resource to work on it in 2007.

Peter further explained, that he didn't consider himself to be an innovative person technology-wise, since he did not start in the business as a technical guy. This awareness made him hire major players with extensive solid technical backgrounds who acted as the leaders at the technical level and they would actually orient the department in the right direction, including the system architects and the function team leaders. Peter really trusted them and had delegated the decision-making authority to them. He remarked "It's all about experience. The more they know about the system, different technologies, the more easily they can contribute to innovation in the department." Since the decision-

making authority was given to the system architects and function team leaders, it's basically up to them to decide whether they should take Daniel and Jonas' proposal or not. They did not say yes to the proposal and that served as the primary reason Peter was not interested, as "the system architects obviously know more than others".

In regards to Daniel and Jonas' case, the department chief system architect Ola (male, 47) felt a little bit of a shame that they missed the chance to implement their earlier proposal, given what a truly interesting and cutting-edge technology it was. This comment made by Ola is thought-provoking.

> *Do you think you can explain a little bit why you have rejected the proposal Daniel and Jonas made back then? Especially considering the same idea was taken when it was made by another consultant.*
>
> *Ola: With respect to this question, my straight words are: their proposal was not really impressive at all, and it didn't really do a complete analysis either. Based on what they've written, I'd reject it again if given another chance. But of course, it was a little bit of a shame that we missed this chance to use their proposal, given what a truly interesting and cutting-edge technology it is.*

It is worth mentioning, that within Peter's department there is a team made up of five employees, which is the youngest team in the department with the average age of thirty five. This team plays a very important role in the department since the five young men are responsible for the core service developments and only five of them had mastered these critical technologies. Moreover, this team seems to have a totally different way of dealing with innovative ideas.

The innovative ideas came more frequently when they decided to have weekly fika-times where each of them, would take turns bringing over cakes to work every Friday and had half an hour of free talk, reflecting what they had done over the week and anything interesting they noticed. Stefan (male, 29), one of the team members, described how they were continuously engaged in creative and innovative work and discussed this together:

Stefan: We are at the same age and we have more things in common to share. We have this implicit rule that everybody should share interesting stuff they've noticed with the rest of the team. We started discussing via emails first and as it begin to become more serious, we would call a meeting to briefly talk about our ideas and see the feasibility of using and implementing it. So fika-times and interesting emails are where we got these ideas started, which I really enjoyed!

That's great! But are there problems you have encountered when proposing your ideas to the manager?

Stefan: Not really because we always write the proposal and do the presentation together to both the manager and system architects. Of course, sometimes it's hard to convince people, but I think that's how it is, isn't it? It takes time for other people to understand your idea and finally accept it. I would say it's much easier to do this with the five of us together, because if some of us are stuck, there's always someone else backing up there! I don't think we ever had any problem proposing our ideas either. There were cases where we were rejected, but if we really had faith in the idea, we would put our heads together and work out a plan to get it approved by them.

4.3 Case two: The story of Matt

Matt (male, 45) started to work for an IT services with company two in the summer of 2007, after an extensive job search upon moving to Malmö. Company two is a tech consulting company that offers IT implementations, training, and staffing for internal client projects. Matt's decision to work for this company was the extensive tech training they provided employees, the open work atmosphere and the loose managerial structure the Malmö office employed. The position Matt entered into was Account Executive, responsible for seeking out new clients, supervising IT implementations, as well as managing internal consultants. After about a year with the company things were going well for Matt, he had the top position in his department and enjoyed working with his colleagues.

The comfortable situation began to change for Matt after an annual company meeting, where they discussed the new development and forthcoming implementation of a new internal database in the next year. The old database was the lifeline for all the employees, as it tracked client orders, held consultants and clients' personnel contact information, and provided a way to streamline internal HR processes. The internal database (called Zaccess) was used by every employee on a daily basis and was very difficult to understand initially; therefore extensive training upon employment was provided. After going through a demo version of the proposed new database they had on display at the meeting, Matt began perceive that this new system had a more attractive interface, but clearly this system was far too complex for everyday use when transactions needed to be conducted immediately. Matt also realized how much this new software was going to cost the company with its purchasing price and the added expense of flying a trainer to each individual office around the country.

Matt quickly began to conceptualize on how he could develop a solution that could meet demands of both sides. He knew by speaking with other colleagues that they shared his concern and sentiment on the relevance for such an application in actual work situations. He then brainstormed on how he could convince management to stand pat with the current database and potentially modify the existing structure, so a transition to new platform would be more seamless and familiar for its employees. Matt has a background in software development, from his studies in college and partnered with a colleague named Christophe, who was an excellent database developer that had been with the company for more than eight years and was part of the initial team, which rolled out Zaccess. Both of them were then given permission from their superiors to work on the software during office hours as long as they were on top of the other tasks.

After about nine months of sleepiness nights, with many ups and downs along the way, they believed they had achieved a database system that could appease both sides. They preserved the ease of use and it had an interface almost exactly the same as the last one, therefore no extensive training was needed and employees could actually feel confident using it every day. It could still be used effortlessly for rapid transactions and the costs to get it up and running were only marginally more expensive than the new database. They

also made a couple upgrades that the other software provided, such as automatic saving, better search results from queries, personnel contact lists, and a more efficient calendar for client follow ups. Both thought they had achieved a perfect solution for the company; the next big step was trying to convince management of its practicality.

Then Matt presented the proposal of the database upgrades one month after that. Initially the decision board thought it was a great idea, especially how they had dedicated so much of their own time to help the company become more efficient and in the end save them money. Consequently, they still decided to go with the new database from the external consultancy.

> *In the end did you ever get a concrete reason why they decided to go with the other database?*
>
> *Matt: Yes and no, I mean yes in the sense that they told us it was because our software cost more and that management had an interest in saving money at all costs. But no, because when you look at the bigger picture the costs would clearly be offset by the training costs of flying someone in to each individual office and then the workload lost by employees having to stop their everyday work to sit through two days of training. In addition, we suspected that since the company (providing the new database) was a previous customer of our IT consulting services sector, the deal for the database was made to further this relationship along.*

4.4 Case three: The story of Jonathan

Jonathan's current company (company three) is a relatively medium sized firm that is attempting to challenge the leaders in the Broadband IT communications field. He has currently been part of this company for six years and has seen it rapidly grow each year, at times when most companies are struggling with the economic recession. Jonathan's role within the company was as a Project Coordinator in the R&D division. For the first four years he was really enjoying his work at the new company. He had the freedom to develop his own lab from the ground up, could staff his group with the employees he preferred, and his deadlines for projects were tough, but usually fair and somewhat

flexible. Jonathan's previous manager had a very collaborative leadership style and really stressed that people pursue creative ways to discover solutions to problems.

Things however, began to change for Jonathan when about two years ago a new management group was brought in to his department. The new management style put in place, was almost the complete opposite of his former manager. The new manager (Praveen) was very removed from his direct employees, did not understand how to relate to his team, and became extremely frustrated when any deadlines were postponed. After a couple weeks of working with the new manager Jonathan began to observe that Praveen would force employees to work heavy amounts of overtime to meet his new unrealistic goals, and his overall attitude towards his employees was dry, controlling, and rude when addressing his team. Jonathan knew that he was going to bump heads with this new manager as he would often be characterized as somebody that will speak his mind.

Over the next couple months the relationship between the two began to deteriorate further. The rapport reached a point that every innovative idea that Jonathan would present to Praveen would end up getting rejected for a variety of reasons, none of which Jonathan believed were valid. Jonathan then had to decide what would be the best method to go about this. He needed some of his proposals to move on to the actual implementation stage to ensure his role within the company was safe. But he did not want to tell HR about his superior's behavior, since many of the VP's had strong relationships with the new manager. After careful evaluation of which route to choose, he decided that he would keep pushing and proposing his creative ideas that he was so confident would work.

What Jonathan then realized, was that if his direct manager was not onboard with a proposal that the journey would not stop there, he would now take all his proposals to the next level of command before completely closing the door on his innovative ventures.

Jonathan's situation deteriorated further with his manager, to a point where he only felt comfortable proposing to the next level of command. The dictator, subordinate relationship Jonathan had with his manager lacked any aspect of a transformational or transactional leadership style. Praveen's leadership style seemed to fear any innovative idea as it would threaten his own standing within the company.

In your experience do employees get the freedom they need to solve problems on their own?

Jonathan: They appear to feel their power is threatened if one of their direct reports has too much latitude to be creative on their own. This type of manager does not want one of their engineers to appear to be more effective than they are. They expect those that directly report to him to do exactly what they tell them to do and reprimand them if they deviate. I currently work for this type of manager. However, in past I have held jobs with managers who do recognize that empowering their people to think on their own is management's greatest strength towards innovation.

Besides these three cases, some other people from different companies were interviewed as well. Even though not all of them provided us with very detailed information, for the sake of limited time or commercial confidentiality, most of the interviewees indicated similar information to what Daniel, Matt and Jonathan said when talking about innovation in their organizations. Obviously the innovation capabilities in most of the interviewed companies are questionable, and based on these interviews three major reasons have been drawn out in the preceding sections.

4.5 An Obstacle that is easily Overlooked

The employees in knowledge intensive firms tend to have distinguishing features as a result of their educational background and the fact that they work in an environment where cutting edge knowledge and technologies emerge at an endless pace. Additionally, as educated people they tend to act independently even though most of them accept the importance of team-work. They are inclined to care more about their personal development as opposed to the needs of the organizations. Consequently, there seems to be a conflict between self-realization and the organizational interest for employees as they tend to be more loyal to knowledge and technologies than to the organization processes.

In knowledge intensive firms, the most valuable resources are invisible—knowledge, experience, techniques and creativity—which are internal merits of employees and almost impossible to be controlled by the leaders. As exhibited in the case of Daniel, his firm failed to meet his expectations with regard to bringing into play his innovative talent, and he then figured the best route would be to abandon the company. How he behaved here reflected the characteristics of employees who can easily find new career opportunities with their rich experience and solid professional knowledge. This can actually put organizations in major risk of losing competent staff. When Daniel presented their proposal during the meeting, Peter, the department manager, didn't show any interest or encouragement. As stated by Peter himself, he saw a bigger picture than Daniel did, and therefore could not act supportive in this case, due to budget and other issues. However, he indeed ignored employee's strong self-esteem and loyalty to the company.

Moreover, another unwritten rule should be taken into account here, namely the Jante law. The Danish-Norwegian author named Aksel Sandemose (1899-1965) firstly enacted Jante law. He depicted the rules of behavior in a fictitious city called Jante in his novel *En flykting krysser sitt spor (A refugee is crossing his trail)* (1933). He described Ten Commandments[3] that are known as Jante law and the overall theme of it is: you are not better than anybody else. The Jante law is well-known in Scandinavia and it suggests the acceptable behaviors by emphasizing how important it is to know your place in certain circumstances.

Under the influence of Jante law, people are self-disciplined and a little bit conservative when it comes to remarking on something new. When Daniel commented about the weird

[3] The ten commandments are:
1.Don't think you are somebody
2.Don't believe that your are as good as us
3.Don't believe that you are wiser than us
4.Don't believe that you are better than us
5.Don't believe that you know more than we do
6.Don't believe that you are more than us
7.Don't believe that you are capable of anything
8.Don't laugh at us
9.Don't think that anybody cares for you
10.Don't believe that you can teach us anything

silence in the meeting it is understandable: people just don’t want to offend the development team of the system that Daniel and Jonas tried to ameliorate. Working in an atmosphere of ostensible harmony might cut the throat of innovation in knowledge intensive firms because this Jante law-dominated culture is built upon the “equality based on conformity” but not the “equality of opportunity” (Gullestad 1992). When employees are reluctant to express what’s on their minds, for fear of sounding boastful and are afraid of being sharp, the team may ‘spoil the ship for a half penny worth of tar.’ It smothers the creative spark when passionate and innovative employees feel frustrated as their colleagues remain indifferent in a dispute, because it is the collision of different ideas and not conformity that encourages innovations. As for Matt’s case, the decision board was also a bit conservative when they decided to give up Matt’s proposal and go with the new database from the external client. They did not want to risk losing money since Matt’s proposal costs were higher, even though Matt made them realize these expenditures would be offset by the training costs of the new system. Furthermore the workload lost by employees might have been significant due to having to sit through two full days of training. Since the deal for the database was made to cement the relationship of the previous customer, no one wanted to voice approval for Matt's proposal and take the consequences for hurting current business relationships.

Besides the characters of employees, the characteristics of the leaders are part and parcel of the innovation processes. In Jonathan’s case, the new manager (Praveen) lacked the ability to communicate with his colleagues, which made him controlling towards his employees and set unrealistic goals. Praveen failed Jonathan by not providing a culture of creativity as well by not taking ‘personnal responsibility for the development’ of his subordinates, and when Jonathan presented his innovative ideas to him, almost all ended up getting rejected for a variety of reasons. However, Jonathan was not convinced by those reasons given by Praveen since Jonathan thought Praveen was a leader who just wanted the employees to do exactly what they were asked of them. The interpretation of the situation made by Jonathan might be partially due to the poor relationship Praveen and him shared. By talking to some other colleagues of Jonathan, it is obvious that Praveen did not see the importance of innovation, nor did he appreciate innovative ideas

generated inside the department. Praveen believed the employees' responsibilities are to finish the tasks they're assigned, but not "waste time" in creating new technologies.

In contrast to Praveen's managerial style, Peter is aware of the importance of innovation for his department and company. Peter has been manager of his department since it was formed eight years ago, and according to him, innovation has helped them evolve tremendously over the years. At the time there were only around ten people working within the department, now they have almost 60 people working in different groups that specialize in various business and technical areas. He owes all of these achievements to their consistent effort into technical improvements and innovations. However, the fact that the leaders understand and attach great importance to innovation does not guarantee success and the past accomplishments are not a recipe for future successes. The leaders have to constantly fight against arrogance and complacence in order to sustain innovation

Peter explained, his lack of interest in Daniel and Jonas proposal was due the fact that he did not believe there was problem with the established system. "So why bother to introduce new technologies when we are not sure if they're really beneficial to us or making any improvements, especially when I am already very satisfied with our work here? That's why I haven't thought about doing anything more." And Peter delegated the decision-making authority to the system architects and the function team leaders because "it's all about experience, the more they know about the system, different technologies, the more easily they can contribute to innovation in the department," remarked Peter.

As a matter of fact, statements such as, "why bother to change it?" and "we believe we know better than others," is a huge threat to innovation in enterprises. It is for sure that experience matters, however there are always exceptions where employees with a little experience are extremely sharp and innovative with some off-the-wall thinking—as shown in the case with Daniel and Jonas.

In addition, the ability to motivate employees is another important factor of being an innovative leader. When asked if he had ever intentionally promoted people to be innovative at work and tried to build up this innovative atmosphere at work, Peter answered:

> *Actually I don't really see it this way. I mean, for people who can be innovative, they will be innovative anyway, and for those who are less innovative, I don't wanna push them to be. I believe most people, including me, like to have a work environment where they can do things they like, not being pushed by anyone. So basically, I don't want to lead my department like a dictator does.*

There is no doubt that it is a virtue to respect the choices of others and the leaders do not want to seem to be too pushing. There are cases where people could have been more innovative than they are though, it's a matter of fostering what great potentials they have and providing a environment where they can succeed. These people are treasures to be discovered by a leader with the ability to inspire others to be at their best and serve the employees in implementing change and innovation activities. It is true that most people don't like being pushed to do anything, even if it's for their own's good. However, there are some soft approaches to develop the potential of creative employees or adequate incentives to motivate people—to foster a motivating working environment in which employees can be pushed softly without even being aware of it. For example, the leaders can strive to build win-win systems which give rewards for those who exhibit exceptional performance and behaviors. In such a motivating working environment, people with innovative ideas get supported and rewarded with the intention that passionate employees will easily be attracted to their work. That’s why corporate culture as an informal environment is considered to be a critical factor of people’s innovation capability— it might convince employees to work in a common direction towards innovation, or on the contrary, be a stumbling block in nurturing innovators.

4.6 The policy influences

In Peter's department, a variety of practical methods have been developed with the goal of fostering innovation. For example, they have biweekly decision-board meetings where all the architects and function team leaders hold permanent positions and all other employees are invited to it as well. During this meeting, people can feel free to report problems, make suggestions, and permanent board-members will decide whether to take the suggestions or not as they see fit. What proved to be ineffective in this case was that

almost all the important suggestions or system change proposals were mainly made by the system architects and function team leaders. While the rest of the employees did not seem to be very interested in participating at all. Even though there were few people who have come forth with some interesting ideas, they seemed unprepared and thought it was unlikely they would be supported by the decision board. This lack of response from the employees is frustrating since the department has made an effort to be open to new ideas. However, what can be seen thourgh Daniel and Jonas' case is that there are still some policy deficiencies that have blocked the innovation process.

As mentioned in the literature review, innovation is very complex and has been defined in multiple ways. Some people also believe that there is no innovation process, whereas the reality is that many innovations actually fight their way into existence through a process that is so poorly defined people do not realize it exists (Peter Merrill, 2008). The existing policies towards promoting innovations tend to concentrate on the process of producing new knowledge or technologies. There are a number of different phases in successful innovations, not just the producing phase: identifying or generating the new idea, realizing the new idea, and diffusing of knowledge or technologies. If any of these phases fail, the success of an innovative concept becomes uncertain.

As mentioned earlier, Daniel and Jonas tested implementing this new technology in the system, and presented their idea on at a department meeting. However, their proposal was doomed to fail as in truth Daniel and Jonas were unprepared to effectively convince management. It is not entirely all their fault since there are some policy deficiencies with regard to generating innovations that come from the lower level of the organization structure. The hierarchical organizational structure of Peter’s department can best be illustrated by using a pyramid example. There are about forty people in the department and on top of the pyramid is Peter, the department manager. There are two section managers who report directly to Peter. There are three system architects and two function team leaders who are respectively immediate subordinates to those two section managers. On the lowest level, there are about thirty baseline staff employees.

As mentioned above, the department manager has delegated the decision-making authority to the system architects function team leaders, since they have rich experience

and solid technical background, and they also have the privilege of reporting directly to the department manager. Conversely, for the baseline staff, it is not as unblocked as it is for the system architects and function team leaders to get support on their proposals. There are several levels of management between them and the top decision makers. The baseline staff has to struggle all the way from the bottom to the top, and the decision-making has to go through a process at each level. The decision-making process can be unnecessarily time consuming and the more complex the process is, the higher the chance that promising proposals get denied due to misjudgments. It appears through Ola's comments that process of reviewing people's suggestions in this department is somewhat unfair to employees who are not always working with proposals. The system architects and function team leaders have been too harsh on requiring them to make perfect proposals. What might have happened is that great ideas coming in a lame report were turned down due to what form it was in, rather than what the subsantce of the idea was. It seems necessary to make the whole proposal process much more pleasant, efficient and easier for people, by offering them the chance to speak out on whatever is on their mind. As suggested by Ola, there can be two ways to promote innovation from the lower level of an organization: making people feel that the process of expressing their ideas is encouraged and creating a supportive environment.

Basically the higher the person's position is in the formal hierarchy; the more likely he is to be a successful innovator and the more radical the development that he will be able to introduce. Alternatively, at the lower levels of the organization the people can introduce fewer and less radical types of innovations (Kenneth E. Knight, 1967). In Matt's case, the innovation process was much easier than Daniel and Jonas', partly attributed to Matt's top position in his department. He took the initiative in trying to solve the problem as a leader, which made it easy to provide time and technical support as well as finding partners to get the proposal process started.

In light of this, a flatter management structure could be a good solution to the above problem by keeping the organization structure flat, which can make the decision-making process as fast and flexible as possible. This does not necessarily mean that the company or department should break down their specialized business units, which might take a lot

of time and effort to change and rebuild the hierarchy effectively. Consequently, policies and proposal processes must be addressed if innovations are to be better developed. Among many tested policies for stimulating innovations, mentoring and peer networks are crucial for providing support in successful companies that have intense talent-management processes in place and put identified innovators in the line of fire, where natural innovators thrive (Cohn, et. al. 2008).

Cohn (2008) discussed that "smart organizations pair innovators with carefully selected mentors who can continually educate them about the people they are most likely to encounter and the interactions they are most likely to experience. This idea is a point that closely aligns with the theoretical community approach parameters which consists of in focusing diverse groups towards one innovative idea. Mentors can provide potential innovators with information about the people they are presumably to encounter and the interactions they are most likely to have." Referring back to Daniel and Jonas situation they called a meeting: even though they only tested the new technology by themselves and hastily introduced it to the others in the department without subjecting it to external point of views.

If Daniel and Jonas had been assigned to mentors who can help them better understand the proposing process and how to write a persuasive report, there is possibility that their initiative would have been accepted and they could launch into further research. Mentoring is the perfect supplement to the innovators' natural mix of intuition and curiosity, and with appropriate mentoring, one can share information that might be relevant to a particular course of action (for example, someone else may have already tried it and failed).

4.7 Peer-network support

Another key factor to support innovation is to turn to peer-network for help according to Matt and Stefan. A comprehensive definition of network within organizations offered by TiJssen (1998) is "An evolving mutual dependency system based on resource relationships in which their systemic character is the outcome of interactions, processes, procedures and institutionalization. Activities within such a network involve the creation, combination, exchange, transformation, absorption and exploitation of resources within a

wide range of formal and informal relationships." As referred to in the literature review, networking and community approaches encourage knowledge-sharing (including tacit knowledge) amongst and between teams groups and individuals will aide in developing innovative ideas. According to this definition, the case of Stefan's five-person team is obviously a successful example of fostering peer-network to fuel innovations, even though it is informal and just a beginning within one team. In successful companies like Google, peer-network is often used to strike sparks out of people by bouncing ideas off one another.

Thus, we believe that if the know-how of this five-person team is introduced to the whole department, the failure of Daniel and Jonas' proposal may be avoided by getting better prepared at the first place for the reason that "peer networks that meet regularly and have open channels of communication provide a sense of solidarity and a uniquely fertile environment in which to exchange ideas, impart information, and instill hope" (Jeffery Cohn etc. 2008). This can be seen in Matt's case when he started the innovation process: by talking to his colleagues first in order to make sure that his concern wasn't just personal or universal in the organization, he also gained useful information for further research by sharing his thoughts and ideas with them. In light of this, more concrete issues are addressed and predicated using peer-networks.

Further studies of Peter Merrill (2008) showed that to make any successful innovations, there are four different types of innovative individuals required to build up the peer-network. They are creators, connectors, developers and doers. Creators are considered to be the most crucial to any innovation processes and these four different types of individuals collaborate and help each other to fuel innovation forward at different stages of the innovation process.

When the potential innovators are officially supported by mentors, and also provided with peer-networks, there is still one thing missing, namely to find the appropriate niche for innovators. The case of the five-person team offers an excellent example of placing the most innovative employees at the heart of the department structure so that they are granted autonomy to explore new ideas which should help further innovative ideas along. It also demonstrates a proposition of Jeffery Cohn's (2008): To create the innovation hubs

which integrates a small group of innovators into units and thus give them access to first-rate resources.

5. Discussion

The above analyses of interview data are based on organizational bodies and they imply that the key elements for successful innovation lie in two layers: the management of innovation process and leadership styles adopted.

5.1 Innovation process management

Before addressing the innovation process by which creative ideas are introduced into an organization, one thing we should do is to discuss if innovation is a process that can be managed. Social scientists have long been interested in the process of innovation: how is innovation generated, developed or hindered, as well as the diffusion of innovation. Judging by academic and managerial discourse, innovation is widely recognized as an activity to be carried out in an open and unstructured environment where promising innovators feel free to generate new ideas. Being provided with a degree of autonomy and flexibility is important for innovators. In contrast, Judge et. al. (1997) has suggested that “management of innovation involves a dilemma of freedom and control, namely the innovation process needs openness and autonomy for the researchers and there should be guidelines simultaneously.” According to Judge, some managers gave their researchers too much autonomy by not specifying the desired end result, in which the innovation conditions can easily lead into a blind alley. It can also be notable that some firms that provided too much operational freedom and failed to manage appropriately, were not exceedingly innovative compared to the other firms.

Cooper and Kleinschmidt, (1987) investigated over 200 new product case histories in 125 industrial product firms, they argued that “a well-defined trajectory of innovation is critical to success, notably financial performance, and to a lesser extent, market impact.” When the elements and stages are clearly defined prior to product development, the success rate tends to be higher. According to Mitchell and Coles’ research (2004), every experienced company that they’ve investigated has established a well-oiled innovation process, which significantly reduced the amount and severity of errors.

Anton J. Cozijnsen et al. (2000) researched a way to search for the answer to the questions of “What are the factors that lead to success and which factors lead to failure in the projects examined?” They came to the conclusion, that “the differences in innovation success of organizational innovations, 61 percent can be explained by the implementation factors such as time management, cost management, information management, decision making and resistance to leadership. The factors of cost management and resistance to leadership is one explanation of the differences in successful organizational innovations.” Vijay Kumar (2009) argued that “it is possible to create innovations using well-developed processes for recognizing people’s needs and contextual demands, but a high degree of discipline is necessary for these processes to work. Successful innovations emerge from well-informed, purposeful, and disciplined processes and their applications. This requires reliable frameworks, structured methods, and rigorous tools.” Therefore, it comes as no surprise that the innovation process can be managed, which is consistent with Phil Crosby’s (1995) point of view that, “all work is a process and all processes can be designed, measured, and improved.” This shows that there is a positive correlation between the management of an innovation process and the viability of it. Moreover, innovators can work more effectively by understanding how the innovation system works.

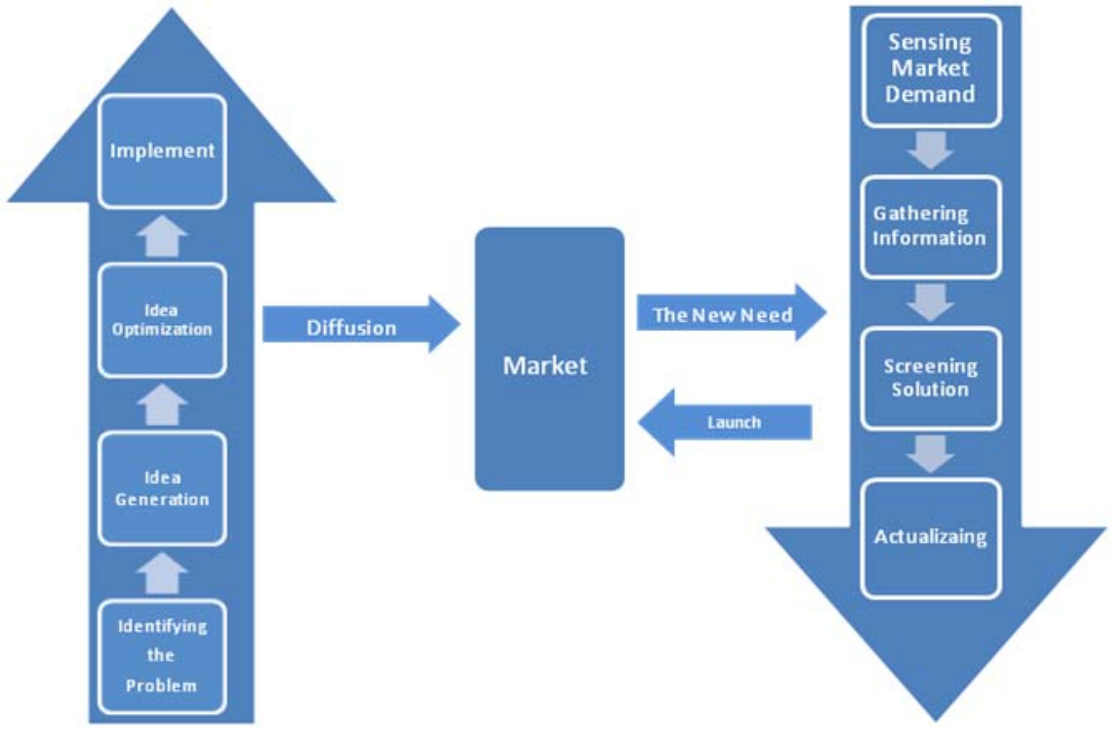
A lot of researchers have studied how to effectively manage innovation from many different angles, and a couple of theories have been proposed to interpret the innovation process. Although differing somewhat, there is a common ground on these studies, namely the innovation process is divided into different phases and it is believed that the crucial factors for innovation success can be better influenced when the innovation process is split into constituent phases. Eric von Hippel (1990) argued that “an innovation project of any magnitude is divided up (“partitioned”) into a number of tasks and subtasks that may then be distributed among a number of individuals, and perhaps among a number of firms” and “the division of project work into tasks may appropriately proceed as the project itself proceeds.” The definition of innovation made by Gemuenden (2003) shows a holistic picture of innovation, both internally and externally: innovation is “a management process, involving multiple activities, performed by multiple actors from one or several organizations, during which new combinations of means and/or ends,

which are new for a creating and/or adopting unit, are developed and/or produced and/or implemented and/or transferred to old and/or new market-partners."

Consequently, innovation process consists of two major parts—the development of new ideas, which is the internal part of the innovation process, and the diffusion of innovation, which is the external part. However, there seems to be two separated streams of existing innovation process theories (mostly in the first four generations grouped by Roy Rothwell). While some researches focus on the internal development process of innovation (or the word *Invention* can be used here to represent this phase), the other stream of researchers believe it is the diffusion of innovation. According to this notion, some existing researches are partial and fail to take into account the whole lifecycle of the innovation route, whereas it can helpful to build a more comprehensive model of the innovation process.

The literature discussed above, inherently reveals the essence of the innovation process. On the one hand, the innovation process is a system, not just a combination of separated phases. On the other hand, there are two major phases of innovation processes: the development of new ideas/technology and the diffusion of innovation. Based on this concept, we can establish a linkage between these two phases making the innovation process an integral one by providing a circular model of innovation processes.

To build up this model, the first thing taken into account, are the different driving factors of innovation. In this circular model, all the innovations are divided into two major types, the problem-driven innovation and the market-driven (or need-driven) innovation, and this model is committed to figuring out the differences and underlying linkages between them.



-Figure 2: Circular innovation process model

There are two different innovation processes in this model. In the problem-driven innovation process, it all starts with the sensing of problems that can be both obvious and underlying daily work. One of the most important features of this process is that it is generated at the bottom of an organization, namely it derives from the employees and then develops to get supported by leaders. There are four sub-phases in the problem-driven innovation process.

Sub-phase one: Indentifying the problems

In this phase employees start the innovation process by identifying the problems and generating ideas. Employees who observe situations from different points of view are strong in sensing problems to be solved. In this starting phase, problem identification abilities of employees are vital since it's where innovation stems from. Furthermore, this is the phase that requires the most degree of autonomy, compared to all the other phases in this model. Employees with an acute sense of problems and potential opportunities will work with higher efficiency if given more time of their own. There is a successful

example of giving freedom to employees at Google, one of the world's most innovative companies. Both employees and the company have been shown to benefit from the "70-20-10" policy for engineers. This means that for the programmers, only seventy percent of their time is to be used in doing their core job, while twenty percent can be spent on related activity or a project that will help them do their core job better, and the remaining ten percent of their time can be spent on "blue-sky thinking," such as brainstorming on how to make new products (James Brockett, 2008).

Sub-phase two: Idea generation

To solve the identified problems, or to make potential opportunities come true, breakthrough ideas must be generated. The phase of identifying problems requires an understanding built off of straight experience, on the other hand, idea generation calls for abstract thinking. The traditional group technique of brainstorming is always used in this phase to discuss the identified problems. What is more, divergence is appreciated here, so that different new ideas can be put together and integrated into a single conceptual scheme.

Sub-phase three: Idea optimization

At this phase, different ideas are converged based on the conceptual scheme, and practical plans for the identified problems are developed. Before the final plan is drawn up, feasibility, validity as well as risk, should be carefully evaluated using specific criteria.

Sub-phase four: Implementation

Based on preparation work done by the first three phases, at this last phase, it's time for people to get work done. After certain new ideas become conceptual schemes, which turn into practical plans, it then involves experimentations of various technologies at this phase. If successful, these experimentations are tried out in the initial stages and then these technologies are turned into products. This is the last step of the whole problem-driven innovation process, since it's the last chance to test and modify these new technologies or products before launching them to market. Possible drawbacks are to be

detected at this phase or else the organization will run the risk of suffering from severe losses if the products/ technologies fail to meet the demands of the market.

The outcomes of the complex driven innovation process are that the new products will be diffused. After diffusion, whether the products match the market demand becomes central to a successful innovation. In consequence, the market is far more important to innovation than people realize, because it is the source of creative ideas and it directly decides the future directions of the technologies. The products are always at the beginning of the next innovation round no matter if they survive in the market or not, since they help innovators sense the demand or the significant shifts in the market.

When it comes to sensing the needs of the market, namely the need of consumers, it is always easier said than done, especially when the products launched to market seem to be successful. This is because most of the industries are thought to have matured completely and the explicit needs of the consumers have been satisfied with industrial technology (Hideyuki Ito et al. 2001). In order to identify the new demand in the market, it requires the capacity of discerning the uncertain market underlying the seeming supply-demand balance.

As shown in figure 1, the market-driven innovation process is different from the problem-driven one: While the problem-driven innovation process is generated at the bottom of an organization, in the market-driven one it is the leaders who take the initiative. There is four sub-phases in this process:

Sub-phase one: Sensing market demand

At this phase, it is the leaders that take the initiative. A series of strategies for finding the market demand and opportunity are needed here, such as using questionnaires or customer surveys to solicit customer feedback, and assessing how competitor's products impact market. It is crucial that decision-makers who are on top of the organizations hierarchy have the ability to sense the market from the customers' vantage point and try to find the latent gap between the customers' expectations and reality.

Sub-phase two: Gathering useful information for identifying possible solutions

Generally speaking, customer surveys do provide us with good ideas on how to improve the existing products in order to meet the market demand. However, the information generated directly from the market is based on first-hand experience given that it is just raw data. The first step is to do some in-depth analyses on the information. As the market-driven innovation is a top-bottom model, it is easy to gain the staff's support, in which case the problem can be divided into pieces and then distributed to different groups so that the information is analyzed from multiple perspectives.

Sub-phase three: Screening solutions

Innovative ideas generated from market demand generally enjoy smaller risk than the technological ones. On the other hand, there are still many factors to consider when it comes to nailing down a certain plan or solution. According to JIANG Xue-gen et al. (2007), there are many factors that can cause risk: whether the solution aligns with the real demand of customers and whether the technology matches the market demand or the demand for new technology is actually beyond the market. The screening of possible solutions is a comprehensive process based on technology and policies as well as financial concerns.

Sub-phase four: Actualizing the solution

While the other three phases put more emphasis on the business side, this phase takes root in knowledge and technology. When the problem is found and the solution is clear, the last step is to work it out—making the prototype or sample products, and testing them before launching to the market. The products generated by the market-driven innovation process can be launched to the market directly. While this is taking place, the beginning of the next innovation round can begin if the staff perceives there may be flaws in the new product.

The two major innovation processes are bottom-up and top- down models that are driven by problems and market demand respectively, and the market plays a key role as the linkage between those two. The cases of Daniel, Jonas and Matt are actually bottom-up and top-down innovation models respectively. As can be seen from those two cases, there are obstacles in the problem-driven process as it lacks the leadership support from the

beginning. For example, Gupta and Wileman (1990) studied the new product development (NPD) process of twelve large technology-based firms and found out that the lack of senior management support accounts for 42% of the reason for product development delays. This demonstrated that a supportive organizational culture is very important. In contrast, the market-driven innovation process is initiated by the leaders who can activate innovation progression.

Following the model outlined above, does not guarantee a successful innovation outcome for every company, considering how complicated the innovation process can be. Nevertheless, it gives a clearer picture of innovation, especially the factors that affect different phases of the innovation process. By understanding these four phases, it helps facilitates our further research on how to promote creativity and innovation. From the empirical interviews as well as the theoretical analyses of the interview material, it is clear that there are elements that play important roles in every phase of the innovation process. It's frequently mentioned by interviewees, that leadership styles are the soul of an organization. In both the problem-driven and market-driven innovation processes, leadership styles are of immense importance in every phase, so we move on to further discuss how leadership styles can affect innovation.

5.2 Leadership styles

Researchers have suggested that certain leadership styles can actually help cultivate and perpetuate innovation within organizations. It has also been stated in our literature review that there are many approaches towards managing knowledge effectively in order to cultivate innovation (see community, networking approach, and systems of innovation). In spite of this however, through our analysis we began to see that our subjects under study faced more of a leadership struggle when it came to innovation at the workplace. Previous research (see, e.g., Waldman and Bass, 1991; Bass and Avolio, 1990; Bono and Judge, 2003) suggests that successful managers' have leadership styles that have significantly influenced an organization's innovative ability and creativity. A major avenue whereby this positive impact arises is held to be the establishment of an organizational climate that empowers employees and provides support for innovation

(Jung, Chee, & Chow, 2003). Determining the problems behind the struggles those under our study faced, led us to examine theories on leadership to distinguish if any were able to serve as procedures to follow in order to obtain the most innovative and creative environment for employees. Through our interviews, we had direct questions about leadership and although not all participants agreed entirely with the transformational leadership theory, conversely though the majority was in agreement that leaders were the main driving force behind employees and a company's success with innovation.

If we were to refer back to Daniel's case, we can see the main reason behind rejecting their ideas was attributed to them lacking an operational proposal to try and convince management of its effectiveness. This falls directly in line with what Bass (1985) ascribes to, that often transactional leaders will 'work within the existing cultures, framing their decisions and actions based on the operative norms and procedures characterizing their respective organizations.' If Peter were able to think outside the box of the protocols his company laid forth, his leadership would have appeared better suited for pushing and motivating Jonas and Daniel to reconfigure their proposal and try again. However, Peter did not exhibit this behavior and the proposal was left to die until an external consultant better equipped for presenting, developed the same suggestion. Peter's failure to grasp the innovative concept could be due to the fact that his desire to follow procedures outweighed his desire to pursue an innovative proposal.

On the surface it appears a transformational leadership style that addressed the creative environment, would have garnered the rewards for the company that Jonas and Daniel's had envisioned. As defined by Bass and Avolio, (1990) through a transformational leadership style the manager strives to 'motivate and create an environment of creativity' attributes not possessed, nor enacted by Peter while collaborating with Daniel and Jonas. There is an innovative system in place within their organization, although as mentioned, it lacks a strong reward structure and the proposal process is time consuming with few successes. The environment within the department is one that states that they value creativity, however with the timeframes in which projects are due and emphasis put on following guidelines, practice suggests otherwise. If a more collaborative environment

were put in place, that allocated time and reward systems for innovative ideas, it is hard to argue that employees would not be more capable at being creative. Furthermore, if an environment were in place that reflected the aspects outlined in the community approach knowledge between departments could have been shared and modified by exposing them to different perspectives. This in turn, would lead to more effective proposals and the locally shared knowledge would ultimately advance a superior finished product.

Over the course of our conversations and interviews, it became clear that if Peter's had possessed a more charismatic and collaborating leadership style, employees within his department would have felt more comfortable asking for help with proposals. It has been stated by researchers (e.g., see Bass and Avolio, 1990) that employees tend to thrive off of having a manager that supports them through the entire innovation process. A transformational leadership style would have been better served if Peter had provided a clear vision that maintained the company's goals, and strived for his particular department and subordinates to distinguish themselves by being innovative. Even though this would run contradictory to the Jante laws, it would have been advantageous for the employees and company in the long run.

Transformational leadership thrives when the employee's vision is aligned with that of their leaders. This is based on the premise that 'by framing a vision in terms of work goals and articulating this vision through project selection and project evaluation, rather than overt affective appeals, a work-focused vision or mission may be promulgated that will enhance people's creative efforts' (Mumford, et al. 2002). In this particular case, if Peter had put forth a vision everyone believed and followed the problems of losing Daniel as an employee and the dissatisfaction exhibited by Jonas could have been avoided. Transformational leaders are characterized as facilitating and teaching followers. Leaders that align with this style also try to cultivate a culture of creative change and development, rather than one which preserves the 'status quo.' Peter's complete alliance to the 'status quo' could have been one of the main reasons that he subsequently was so inflexible in accepting Daniel and Jonas proposal. The system they were trying to introduce was new, foreign, and required training to use. Conversely, if Peter exhibited aspects of the community approach, he would have seen the new system as an

opportunity to expand on with other qualified departments to further its development until implementation. A transformational leader would also tend to view a new system as less of threat, and more of an opportunity to succeed at something new, beneficial and dynamic.

If these leadership skills were in action for the employees it could be suggested that their full creative potential would have been realized. In addition, through the observation of a charismatic leader, practicing a transformational style, employees could then see these practices as social norms, which could be instilled in the work environment for continued practice. Bass and Halter, (1988) have stated that 'transformational leaders stimulate their followers to think about old problems in new ways and encourage them to challenge their own values, traditions, and beliefs' (Hater & Bass, 1988). In examining those we interviewed, if they were subordinates in a company that had a transformational leader in place, it appears that their proposal would have had a straightforward chance of acceptance. Additionally, they may have been rewarded for their 'out of box thinking' to improve the company's overall productivity. Another important aspect to take into account is the fact this company could be classified as a KIF. Employees recruited and working within this company are inclined to care more about their personal development. The conflict that can arise at times can be between self-realization and the organizational interest of the company, which can have employees feeling more loyal to knowledge and new technologies than to organizational processes. Leadership within these firms needs to acknowledge the personnel characteristics and understand that employees of this nature, thrive off thinking in alternative ways and developing new techniques to solve problems. Leader's conscious of these characteristics would be more adept at providing the needed support and additional avenues to encourage the inherent desires of those employees under their control.

Lastly if were to examine the situation with Peter, Daniel, and Jonas through the linear model of innovation we can see that there conceptualization of their innovative idea aligns well with this theory. As mentioned in our literature review the linear model, has one do research, research then leads to development, development to production, and production to marketing. The formulation of their initial idea was based on extensive

research on the existing new technologies within the information technology sector. Only through this research did they become aware of the applicability and benefits this new system could afford their current company. The vital aspects of the linear model of innovation are that all innovative ideas are initially based on research. This can be seen as a far reaching assumption that all innovations start with research as many researchers have critiqued, but this particular case does highlight the benefits that can arise when one questions existing systems and looks for ways to improve the situation through research.

In short, for the situation with Peter, a more transformational style would have been more appropriate for that particular environment, whereas Jonathan's case sheds light on a situation that could be most effective, with a mixture of the two approaches. Praveen's behavior contradicts the aspects underlying a transformational leadership style, as these leaders strive to build support from subordinates by aligning a vision the whole group can work towards. The work environment was completely devoid of any creative nature, as deadlines were changed with no communication, and compassion for employees' lives was completely absent. An uncreative environment such as this runs against many of the parameters that underlie KIFs. According to Jonathan this behavior had devastating effect on morale, as employees began to leave, demand to switch departments, and dreaded coming to work every day. Understanding that the allure of working for this company and KIFs in general is the emphasis put on creative development which needs to be accounted for when you are in control of these types of employees. Transformational leadership involves assessing subordinate motives, fulfilling their needs and appreciating their worth, which is clearly an attribute Praveen lacks. A situation such as this, provides a vivid example of where enacting a transformational leadership style would have helped remedy the situation.

In this next section, we examine the significance of transformational leadership at separate phases of the innovation process. Exemplifying a particular behavior at specific intervals during innovation development can aide in obtaining the highest degree of innovative ideas. Bass and Waldman, (1991) established two sub categories of transformational leadership labeled as nurturing and persistent. The nurturing leader exhibits behavior 'oriented towards the development and support of new ideas' (Bass,

1991). Leaders such as Peter could have been influential in supporting and stimulating Jonas and Daniel through the early stages of their proposal. Bass and Waldman, (1991) also state that leaders providing nurturing during the early phases, 'display high expectations and confidence towards follower's innovative ideas.' This could have been an essential characteristic for Daniel and Jonas during the initial stages of their idea development, which would provide the confidence and support needed to develop their recommendation to its full potential. As the innovation process develops, it has been stated that the effectiveness of a transformational leadership style depends on enacting different behaviors over the course of an innovative venture. In the latter stages, the persistence of leadership is what counts until conception. Persistent leadership maintains the energy and enthusiasm associated with idea generation through to the realization and diffusion of an innovation, in the form of tangible products or processes (Bass and Waldman, 1991).

The persistent behavior has been broken into two social factors: internal group relations and external group relations. Factors pertaining to internal group relations are attributed to the costs of an innovation process on the morale of the employees. Bass and Waldman, (1991) states that overtime, lack of progress, or threats from outside of the group (e.g., withdrawal of resources, time allocation, etc.) can deflate the original energy level and cause disloyalty and instability or the possible disbanding of an innovation effort. To combat such issues, a leadership approach that is persistent with its vision, timeframes, and considers the emotions of the employees will have a higher success rate. The main obstacle here is maintaining commitment to the goal through the whole innovation process.

In turning to external group relations of persistence, it pertains to the relationships of those that are outside of the in-group. Two factors account for this focus on external relationships: (1) the inherent uncertainty of innovation success, and (2) the necessary involvement of multiple functional areas and/or customers (Bass and Waldman, 1991). Due to the complexities involved in a innovation process such as other participating groups, demands on timeframes and other everyday works tasks, a leader adept at shielding its subordinates from these influences will be able to keep employees inspired

and on track. The situation with Peter, Daniel, and Jonas lacked any such protection from their peer's external influence during the proposal process by Peter. It appeared as though Peter had no intention of shielding his employees from the outside criticism they encountered when they proposed their idea during the meeting. If a leader is also able to build support from those peripheral groups who are to participate at latter stages in the innovation process, the demands for his subordinates can be managed effectively and employees can focus on their particular aspect. In sum, leadership persistence may be necessary to build a coalition of individuals supporting the innovation across group boundaries (Kanter, 1988).

If we were to examine the situation through a transactional leadership style we could see with relative ease how just a couple modifications could lead to a completely new work environment. As mentioned previously, a transactional leader's style is differentiated from transformational by its contingent reward reinforcement. According to Jonathan, the lack of a reward structure and acknowledgment for those that are innovative is a major hindrance for employees within the department reaching their full innovative capacity. Praveen's lack of support for an innovative venture through Jonathan's testimony, is due to his fear of looking inferior in his superior's eyes and his lack of forethought that employees should be rewarded for creative ideas. Furthermore, Praveen's lack of compassion for employee's lives by changing deadlines and requiring overtime without notice, further exacerbates the aspects underlying the 'contingent reward' parameters of transactional leadership. His demands and fluctuating expectations, leaves employees with a feeling of being unclear on what the department goals are and it falls directly in line with the notion of internal group relations outlined in transformational leadership. Lack of clarity in the situation could be remedied by adopting a transformational leadership style where a clear vision is outlined by management to align all support behind it.

In examining the situation through the 'management by exception' aspect of the transactional leadership style, the relationship between Jonathan and Praveen could have been handled more effectively. By way of the 'management by exception' the leader 'takes corrective immediate or delayed action on the basis of results' (Waldman and Bass,

1991). If Praveen was aware that his department and subordinates were not on board with his leadership style and results began to suffer further, as an adept transactional leader he would have taken the necessary measures to insure employees believed in the process. Furthermore Jonathan stated, when employees would make a mistake or miss a deadline Praveen would react without compassion and demand the employee stay until the problem was fixed.

As outlined in the nurturing aspect of transformational leadership, Praveen lacked an understanding that employees need the highest support in the beginning during the innovation process, when setbacks are at their highest. If no guidance and support is given during these initial stages it can have the effect of damaging all employees' confidence in the leadership and their innovative ideas. This brought down morale further within the group and employees were fearful in submitting any new work to Praveen. If Praveen were capable of enacting an 'active management by expectation' style, the manager would have been proficient at taking corrective actions for the problems before they developed in a constructive manner. This in turn, could have aided in dealing with the low morale and confidence employees now possess when submitting proposals.

In examining the situation with Jonathan and Praveen through a community approach we can see that Jonathan's route to acceptance and further development with his proposals possessed some of the parameters outlined in this concept. He realized that one stop in the chain of command for acceptance should not halt the innovation process. By way of his persistence he took his proposal to higher levels of command within different groups of his company, to see if they saw the feasibility behind his ideas. Furthermore, this sharing of knowledge allowed some of his proposals to be built upon by other viewpoints and aided in developing his innovative ideas further. The benefits outlined in this approach advocate knowledge sharing, and Jonathan's perseverance provides a key indicator that exposing ideas to different team groups can be successful. Conversely, if employees do not possess the confidence in their ideas such as Jonathan did, they could get discouraged for the lack of support from their direct manager and not feel confident enough to take their ideas to other chains of command. Therefore a leader that possesses

charismatic transformational leadership characteristics, could be vital at this stage of the innovation by providing the necessary support.

We have examined how this situation could have been approached differently if a transactional leadership and transformational style were adopted. It has been shown through prior research and our inductive study, that leadership can play a vital role in leading innovative processes along within organizations. It has been stated by Oke, Munshi, et al. (2008) that leadership plays a vital role in fostering innovation outcomes in organizations. It is also important to understand that enacting these styles at different phases of the innovation process, can yield significantly different results. In practice, if Praveen initiated a transformational leadership style in the beginning, by providing a clear vision, where goals would be clearly outlined and individualized support was given to each subordinate, employees would have had a better chance of understanding what was demanded of them. Such behaviors broaden the range of leadership beyond simply focusing on corrective or constructive transactions (Howell and Avolio, 1993). In enacting a transformational leadership style during the initial stages of an innovation processes it can often be mediated 'by organizational contexts that include the provision of an environment that encourages risk-taking, innovative culture and the like' (Oke, Munshi, et al. 2008). The environment appeared to be a major hindrance in Jonathan's proposal process, to remedy such a situation an environment that encourages 'risk taking' with innovative ideas, would provide the necessary foundation for employees to build off of, with a transformational leadership style.

As the innovation process developed, a transactional leadership style could also help sustain the productivity levels by enacting a contingent reward approach, to reward those who are consistently displaying the desired innovative characteristics. Through a transactional leadership style Praveen could have moderated the innovation process by providing 'certain organizational contexts that include the design of formal systems, processes and structures to guide development efforts, rewards and incentives' (Oke, Munshi, et al. 2008).

It is also important to realize that the leader should be conscious of the need to exploit different leadership styles to lead distinct and different innovation processes. For example, a transformational leader must recognize the need to focus more on the transactional aspects of leadership, to direct innovation efforts in the implementation stage which can be exposed to or trained in the transactional leadership style (Oke, Munshi, et al. 2008). The most effective approach appears to be the right mix of both of these leadership styles to garner the intended outcomes of supporting, encouraging and sustaining innovation within the workplace. This is primarily due to the distinctive procedures, activities, organizational structures, and the characteristics of the employees involved in the innovation process. Understanding the situation, goals of the company, the employees characteristics and organizational processes of the company, could help shed light on which phase a particular style should be implemented.

6. Conclusions

This paper used qualitative research methods (interviews) to address the theoretical research on the innovation culture in Swedish knowledge intensive firms, by in-depth examinations of several interview cases. It has been discovered that there are several complex factors affecting the innovation process in organizations. First, the character of both employees and the leaders is an obstacle that is easily overlooked. As shown in Daniel's case, if the leader ignores the characteristics of his staff— strong self-esteem and loyalty to their faith in knowledge, he may end up losing potential creative and innovative ideas. The characteristics of leaders are also vital throughout the innovation process. Leaders have to realize the importance of innovation and effectively motivate and encourage employees to be creative, as well as constantly fight against self-importance and complacency in order to sustain innovation.

Secondly, the organization policies and procedure can affect the innovation process. Some of the existing policies towards promoting innovations tend to just concentrate on the process of producing ideas, but do not provide the avenues to develop it further. There are a number of different phases in successful innovations, not just the producing phase: identifying or generating the new idea, realizing the new idea, diffusing of knowledge or

technologies. If any of these phases fail, the innovation process may not get past conceptualization. Moreover, the higher the person's position in the formal hierarchy, the more likely he is to be a successful innovator and the more radical the development that he will be able to introduce. Therefore, a flatter management structure can be a good solution to the above problem. By keeping the organization flat, it can make the decision-making process as fast and flexible as possible, notwithstanding that the managers will have numerous other work related tasks to handle as well.

Thirdly, peer-network support is advantageous in order to be better prepared before formally presenting an innovative proposal. “Peer networks that meet regularly and have open channels of communication provide a sense of solidarity and a uniquely fertile environment in which to exchange ideas, impart information, and instill hope” (Jeffery Cohn etc. 2008).

It has been further discussed, that to take into account all these factors, it is important to treat the fundamental reasons behind these variables, namely the innovation process and leadership styles. We analyzed an innovation process model which includes two major innovation processes in this model, namely the problem-driven and market-driven process, both of which have several sub-phases. Even though the innovation process model does not guarantee a successful innovation for any organization, it gives a clearer picture of innovation, especially the factors that affect different phases of innovation. By understanding that, it facilitates our further research on how to promote innovation.

Furthermore, from both the empirical interviews and the theoretical analyses of the interview material, it is obvious that leadership styles play an important role in almost every single phase of innovation process which are aspects frequently mentioned by interviewees. We move on to further discuss the leadership styles based on the interview cases as well as the innovation process model. What has been found is that in the beginning of an innovation process, it would be much easier for employees to better understand what was demanded of them, if transformational leadership style was exercised by the leader in providing a clear vision, where goals would be explicitly defined and individualized support was given to each subordinate. As the innovation process went on, it would help sustain the productivity levels by exercising transactional

leadership style in enacting a contingent reward approach, to give rewards to those who are consistently showing the desired innovative characteristics. Equally importantly, the leader should be aware of the need to exploit various leadership styles to lead different innovation processes. It appears that the most effective approach is to be the right mix of both of these leadership styles (transactional/transformational) to reap the intended outcomes of supporting, encouraging and sustaining innovation within the workplace

7. Limitations and Future directions

This paper used the qualitative research method approach instead of a quantitative one due to our study pertaining to variables in a social context with unquantifiable variables. All the interview material we collected is in form of words or audio recordings and we interpreted the information based on our understanding of previous literature. While the qualitative method provides us with in-depth description of single cases, we understand that the reliability needs to be increased. The methods we mainly used, were interviews and literature analyses. If other methods such as non-participant observation are applied, results from different angles can be obtained so that we can get a more solid interpretation of data, thus increasing the reliability accordingly. Based on our study, a combination of qualitative and quantitative methods should be adopted for further studies—using quantitative method to collect numerical information as a back-up for testing our theoretical qualitative conclusions.

Another issue that needs to be taken into account is the future of consultancy. The consultants provide their employers with technical expertise and they focus their attention on certain problems, which effectively accelerates the working process. In Daniel and Jonas' case, the department manager Peter hired an external technical consultant one year after they had proposed their new technology, and then the consultant came up with a new report of the same nature that was approved. Furthermore in Matt's case, the decision-board turned to an external consultancy in the end even though, they realized the advantages of Matt's proposal. These two cases are vivid examples which illustrate that there is a trend towards hiring consultants in many companies. Besides the poorly

prepared report, what is the reason for the department's denying their own employees proposal, but approving the external consultant's especially when they both proposed exactly the same new technologies? It seems that more trust could have been placed in employees than in consultants when it comes to innovation. But which way in business is more effective in saving both time and money? Hiring external consultants or promoting internal innovations? This question is to be answered by future studies. However, none of above arguments means that organizations should stop hiring consultants, as many consultants do add value. It just enlightens us on the subject of banding together the internal employees and external consultants so that we can get twice the results with half the effort.

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