

THE IMPORTANCE OF THE SOCIAL CONTEXT IN SUPPORTING INNOVATIVENESS IN THE FRONT-END OF INNOVATION

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ABSTRACT

The purpose of this paper is to discuss the importance of the social context in supporting innovativeness in the front-end of innovation (FEI). Innovativeness in the front end context can be seen to consist of two factors: creativity and the ability to develop. The FEI is an especially important context for studying innovativeness due to its explorative, creative and unstructured nature. However, there is very little research combining the concepts of innovativeness, social context and the FEI. It is thus difficult to find studies combining the process knowledge of the FEI and the behavioural and social psychological perspectives more familiar in research creativity. This is the area to which we would like to contribute with our research.

The empirical data is collected from an on-going qualitative study conducted in a large Finnish technology company. The method used is action research, and the results presented in this paper represent the outcomes of the first (seven month) cycle of the two year longitudinal study. The results highlight the importance of group support and strong personal ties for the introduction and development of ideas. On the other hand, weak but diversified ties are needed in order to avoid too unified a mindset. The results also indicate that the very perception of what is innovative behaviour is strongly linked to the cultural domain of the organization.

Keywords: Creativity, Front-End of Innovation, Innovativeness, Social Context

1 INTRODUCTION

The importance of creativity and innovativeness in the creation of successful innovations has been widely acknowledged, but the means of their stimulation remain unclear to many companies. Especially the work community and its social dynamics in innovation activities are a particularly tricky, and important, area. This has led to the fact that the effect of the social context of innovation and innovativeness has often been disregarded in companies' efforts to increase their innovative capacity. The purpose of this paper is to discuss the role the social context of an organisation plays in the creation of innovativeness in the front-end of innovation.

The innovation process can be divided into three different stages: front-end phase, new product development project phase and commercialisation phase [1], [2]. The front-end of innovation (FEI) represents the early part of the innovation process and includes activities such as idea genesis and enrichment, idea selection, opportunity identification, opportunity analyses and concept definition [1]. One cannot state a universal set of activities that should be made in the FEI-stage, for it heavily depends on e.g. the degree of complexity and innovativeness of the product and the effect of the FE-stage on subsequent processes [3]. However, several models depicting front-end activities have been developed by, for example, Khurana and Rosenthal [4], Nobelius and Trygg [5] and Koen et al. [1]. The model created by Koen et al.[1] offers good general model of the activities located in the front-end of the innovation process and it depicts well the iterations between different activities. The model is depicted in figure 1. The front-end of innovation is especially interesting when studying innovativeness due to its ambiguous and unstructured nature (and it is often called the "fuzzy front end"). The subculture of the FEI is characterized as experimental and adventurous with high tolerance of ambiguity [6]. The front-end is often seen as the most problematic phase of the innovation process, yet providing the greatest

potential for the improvement of the overall innovation capacity of the company (e.g. [1]; [5]; [3]). The social context of an organisation is perceived as being of particular importance in the FEI [7].

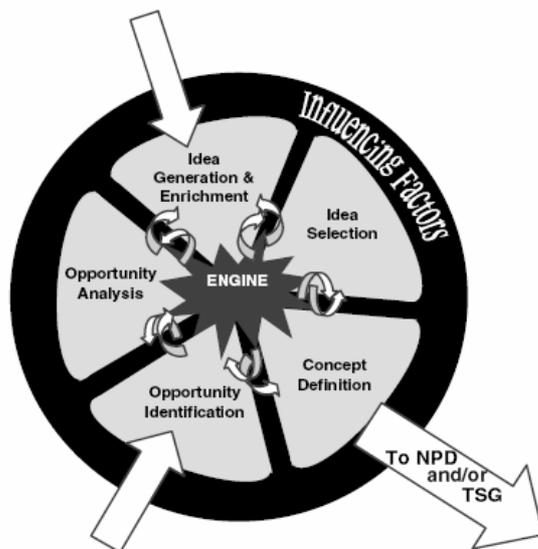


Figure 1: Activities in the front-end-of-innovation – the Concept Development Model (Koen et al., 2001)

The FEI is thus the part of the innovation process where individuals are asking new type of questions and presenting bold ideas, seeking different ways of thinking and doing, brainstorming, dreaming, challenging, planning and championing their ideas. The front-end can be the start of a ground-breaking new technology, process improvement or an incremental innovation for an old technology. The front-end is thus the part of the innovation process where divergent thinking, questioning and creativity are most welcomed [6]. This is what makes the front-end such an intriguing research context for examining innovativeness.

The identification of a clear FEI is easier and more appropriate for product innovation companies – in service companies the stages are more mixed and there are more iterations and uncertainty even further on in the innovation process. Thus the context of this paper is the FEI of product innovation companies. The empirical data for this paper is collected from a large Finnish, technology-oriented manufacturing company.

2 THEORETICAL BACKGROUND

There are many different definitions that are used in literature for innovativeness, creativity and innovative behaviour. These concepts are often used interchangeably and ambiguously which creates easily further confusion in understanding the complex subject. Innovativeness is also somewhat of a fashionable word which is used in common language to describe very different types of behaviour, companies or outcomes. This is why I define carefully what I mean in this paper by innovativeness, innovative behaviour and creativity.

2.1 Creativity in organisations

There are many different ways to define creativity in organisational context. Amabile [8] has identified three different ways to approaching (and defining) creativity in the literature: the characteristics of the persons involved in creative processes [9], the characteristics of the creative processes [10], and the creative output (e.g. [11]; see [8]). Many of the currently used definitions are following the third approach and defining creativity through its output. For example, Amabile et al. [8] define organisational creativity as the production of novel and useful ideas in the work context and [12] as “the generation of new and useful/valuable ideas for products, services, processes and procedures by individuals or groups in a specific organisational context. In their definition of organisational creativity Woodman et al. [13] connect the social system of an organisation closely to the birth of creative output: “Organisational creativity is the creation of a valuable, useful new

product, service, idea, procedure, or process by individuals working together in a complex social system.” It is a valuable notion that the individuals, as creative as they might be, are always affected by the social environment of the organisation, which can either encourage or inhibit their creativity.

Creativity can be (and has been) approached from three levels: the individual, group and organisational level. There is least literature from the group level relative to creativity as well as innovativeness, which is why we are focusing on the group level in the next step of our action research process. In this paper, however, the focus will be on a more general level describing the influence of the social context on the innovativeness of the work community.

McAdam and McClelland [7] have identified three research streams regarding creativity at individual level. The first one examines the characteristics of creative people, second one proposes preferred cognitive styles for problem solving and the third examines the factors that stimulate individual creativity. Amabile’s [8] componential theory of individual creativity belongs to the third stream (since it represents a view according to which practically all individuals can be creative if given the right kind of support) and offers a clear and useful model for understanding the basis of individual creativity. The three components of creativity according to this model are domain-related knowledge, creativity-related knowledge and motivation. The domain-relevant skills include knowledge, technical skills and special talent in the expertise area in question. The creativity-relevant skills represent the cognitive style of the individual, i.e. the ways of problem-solving, working style or cognitive patterns. Task motivation includes two elements: the attitude towards the task and the individual’s perceptions of his/her reasons for taking the task. The former describes the amount of interest and enthusiasm the individuals has towards the particular task, whereas the latter illustrates the perception of one’s own motivation for performing the task. Domain- and creativity-relevant skills define the creativity potential an individual has, but the task motivation determines to what extent this potential is used for the benefit of the organisation.

The research on creativity, originating in psychology, long concentrated on the traits of creative individuals, but nowadays there has been a shift towards a more systemic, contextual and sociocultural view of creativity [14]. Amabile’s model of individual creativity fits this model because it acknowledges the importance of interaction especially in the motivation-component. Csikszentmihalyi [15] as well as Feldman, Csikszentmihalyi and Gardner [16] have proposed a systemic framework of creativity including the interaction between a person, a cultural domain and a social field. According to these models the starting points for creativity are the existing cultural resources (knowledge, practises, problems and instruments) whereas the field recognises, selects and retains the contributions or the new variants of a domain [14]. This means that instead of concentrating on recognising creative individuals, there is an acknowledgment for the need to understand the way these individuals interact with their social surroundings. This affects what kind of behaviour is considered as creative, what type of problems are searched for, what kind of ideas are presented and accepted. Even though there has been a shift towards a more social and interactionist view of creativity, there is still a shortage of studies examining the complex social environment that organisational actors experience. Perry-Smith [17] states in her recent article: “In terms of creativity, little is known about the roles of different types of work relationships, the pattern of relationships beyond direct ties, and the influence of relationships outside of the work context. If creativity is truly a social process, then focusing more explicitly on the social context should enhance understanding of what it takes to be creative in the highly interactive work environments that most workers experience”.

2.2 Innovativeness and innovative behaviour

While there has been extensive socio-psychological research on creativity, the research field of innovativeness is less systematic. The concept of innovativeness is often used loosely and the concentration has usually been on process models and managerial perspectives. There is extensive work to be done in linking the socio-psychological perspective to innovativeness and on the other hand the process knowledge to creativity. Our interest is from our part to contribute to this goal.

While somewhat unsystematic, the literature on innovativeness is not scarce. Innovativeness has been approached from e.g. the point of view of knowledge management [18], leadership [19], resources [20], routines and learning [21], and dynamic capabilities [22]. In addition there are studies aiming to combine all the factors that might have an impact on innovativeness and making prescriptive models on organisational innovativeness [23], [24].

Innovativeness is often seen as an organisation's ability to produce innovations that enable the organisation's success today and in the future. Hult et al. [25] define innovativeness as follows: "Innovativeness relates to the firm's capacity to engage in innovation; that is, the introduction of the new processes, products, or ideas in the organisation", whereas Wang and Ahmed [26] understand organisational innovativeness as an "organisation's overall innovative capability of introducing new products to the market through combining strategic orientation with innovative behaviour and process". I find Wang and Ahmed's definition of innovativeness particularly useful for especially two reasons: 1) it communicates that an idea is transferred into a genuine innovation only when it is taken to market (or in organisational etc. innovations implemented to use) 2) it breaks the innovative capability into behaviour and process. It is difficult to "handle" innovativeness if one does not break the capability down to more concrete factors, such as activities – especially if one wishes how innovativeness can be supported in an organisation.

The research stream concentrating on innovative action, originates from social/organisational psychology. Innovative behaviour is defined as covering 'all individual actions directed at the generation, introduction and application of beneficial novelty at any organisational level' [27]. The innovative behaviours can be categorized into five different sets [28]. The first of the sets is opportunity exploration, which includes four basic behaviours: paying attention to opportunity sources; looking for opportunities to innovate; recognizing opportunities; and gathering information about opportunities. The second set, generativity, comprises of behaviours like generating ideas and solutions to opportunities; generating representations and categories of opportunities; and generating associations and combinations of ideas and information. This set of behaviours thus comprises of generating, categorizing and combining ideas and opportunities. Formative investigations include behaviours that give form to and flesh out ideas, solutions, and opinions and trying them out through investigation. This set of activities comprise of e.g. formulating ideas and solutions, experimenting with ideas and solutions, and evaluating them. Championing consists of socio-political behaviours involved in processes of innovation. Championing thus includes all the socio-political activity of mobilizing resources, persuading, influencing, negotiating, challenging and risk taking. The last set of behaviours, application, includes those behaviours whose aim is to make innovations a regular part of business as usual. These include implementing, modifying and routinising. Of the five sets of innovative behaviours, the four first (opportunity exploration, generativity, formative investigations, and championing) are most relevant for the FEI. The FEI is concentrated on the activities before the product development project, and can include concept and technology development, but not the concrete development activity, routinising, or implementation. Innovativeness in the front-end thus contains the creation of novel and useful ideas and their introduction to the relevant parties further on in the innovation process (e.g. superiors, innovation management system/software).

2.3 Innovativeness, the social context and the front-end of Innovation

If there is something lacking in the creativity research relative to the understanding of the social context, the research on innovativeness has not even come close the level of creativity studies in this aspect. And, quite surprisingly, when combining the words innovativeness and front-end of innovation, one does not find many studies referring to these concepts at the same time. When looking for innovative behaviour and/or the social context in the FEI, the results become quite scarce indeed. Although "a holistic approach" is suggested as a key to success in the FEI [4], the components included in this approach are business strategy, product strategy and product-specific decisions. In order to reach this integration a company is stated to need a process which integrates elements such as development portfolio, product strategy, concept development, overall business justification, resource planning, executive reviews, and decision mechanisms. Five key roles are highlighted: the core team, the project leader, the executive review committee, senior management, and (somewhat overlapping with the others) the idea champion. The role of leadership is also highlighted, but mainly from the viewpoint of strategic thinking, objective-setting and creating a climate "where participants understood the need for a front-end process, and understood that it would take considerable discipline to implement it well" [4], [29]. In their study, Khurana and Rosenthal linked the "cultural approach" i.e. an approach relying on strong organizational culture and deep understanding of NPD, to Japanese companies whereas the U.S. companies were found to go with more formal models. Even this cultural approach is still linked to a strong process orientation and strategic awareness, rather than other

aspects of organizational culture. Team activity in the FEI is approached from the perspective of team management, cross-functional product development teams [30], and team vision and objective clarity [31], [32]. In much of the literature the FEI team is perceived to be in a central position, and antecedents for a successful FEI team are listed [31]; [3], but the deep systemic and behavioural understanding of the social context (be it official team, informal networks or communities of practice) is lacking. It is thus difficult to find studies combining the process knowledge of the FEI and the behavioural and social psychological perspectives of innovativeness or creativity. This is the area to which we would like to contribute in our study. It will be interesting, for example, to examine the significance of the social context from the systemic viewpoint (mentioned above) in the different FEI activities [1] and to link the innovative behaviours with them.

The social context relative to innovation (though not specifically the FEI) has been approached in many studies and from various perspectives. First, communication has been seen as important (e.g. [30], [33]). In this especially the cross-functional communication and more specifically the communication between marketing and product development have received attention. Second, the weak and strong ties between individuals from different units or outside the company have been studied as significant for innovation. The traditional conception has been that especially weak ties enable knowledge transfer and innovation, because they represent less redundant knowledge [34]. However, Hansen [35] contests this view by finding that the aspect in which weak ties are more beneficial is the search of knowledge, because weak ties are less costly to maintain and it thus lowers the search costs of the individuals. In addition he found that weak ties are not as beneficial as strong ties in transferring complex information, which limits their usefulness relative to innovation activities. Thus strong ties can be more beneficial to product innovation, because it usually deals with complex knowledge. Hansen's conclusion is thus, "a strong tie will constrain search, whereas weak tie will hamper the transfer of complex information". Perry-Smith [17] found controversial results to this and stated that weak ties are beneficial for creativity and strong ties are not, though this is most likely mediated with the duration of the relationship. The different results might also have to do with the fact that Perry-Smith look at creativity whereas Hansen studied New Product Development phase. Different types of social ties are most likely important in different stages of the innovation process. Third, communities of practice have attracted attention as a locus for innovation. Communities of practice are important arenas for innovativeness because they continually improvise when finding their way and place within the formal organization and canonical practice [36]. Communities of practice are critical to knowledge sharing in the organization because they act as natural and informal locus for information flows. Communities of practice emerge spontaneously from the networks of individuals who have similar work-related activities [37]. The spontaneity and freedom have led to the linking of communities of practice to innovation and learning. The focus on similar work activities facilitates the transfer of knowledge within them, but also limits to some extent their diversity. This is why an especially potential arena for innovation is the interface between two (or more) communities of practice. The effect of communities of practice on innovation is not always positive for they may constraint the knowledge flows between different communities and limit the innovative action within the whole organization [36]. The possible benefits and constraints posed by the communities of practice have led to the need to the way they could be supported and exploited better [38]. There has been growing interest towards 'structuring spontaneity' [36] and they managers can act in order to develop more innovative capacity and make use of human capital more fully [39]. Fourth, the issues that can be classified under social dynamics have received attention in various studies. Trusting and collaborative climate is believed to enhance creativity. In creating this kind of climate the psychological and political factors of the organization are important, though often overlooked, due to their profound and difficult nature. These hindrances include social distance, special jargon of different disciplines, different work orientation, different degrees of interest in the project's outcome, pronounced need for harmony, and different goals for product development task [40], [30],[41]. In general one can conclude that all of them affect the underlying assumptions of the participants. Since these assumptions are not explicit they create difficult hindrances for collaboration [40]. This in turn makes the climate less favourable for innovative behaviour [40]. The different underlying assumptions make it difficult for the different members of the work community to understand why other actors are talking and acting in the way they are. They simply perceive the reality differently which makes them to introduce different ideas, emphasize different factors and present ideas in different ways. If this is not understood and made explicit, the team atmosphere can become tense and new ideas are easily

rejected before even understanding what the idea is really about. This does not mean, however, that teams and work community members should hold the same kind of underlying assumptions. On the contrary, the diversity of the organisational actors and team members increases the innovation potential, and in order to enhance innovativeness, divergent perspectives and even conflict should be valued. It is important, however, that a group is able to settle contradictory opinions in a constructive way and that differing opinions do not lead to personal or functional conflicts. [40]. An important factor in creating a trusting and collaborative climate is psychological safety, which means that members of the community consider the social environment safe for bringing in diverse viewpoints. It should be highlighted that psychological safety is not equal to cohesiveness, which may reduce willingness to show opposite views or disagree with others. Trust is thus closely related to the freedom to express doubts relative to the task [19], which in turn helps to resolve problematic issues already in the front-end stage of the innovation process and reduces the need to backtrack later on in the process [42]. In addition, the creativity of the work community increases when the psychological safety is high, because members are not afraid of being ridiculed or undermined even when presenting their most innovative ideas.

There is some controversy in using the term innovativeness in the FEI context. As Wang and Ahmed state in their definition innovativeness is linked to the "...capability of introducing new products to the market..." However, when focusing in the front-end one is not examining the NDP activities let alone the commercialization process. It must be stated though that these activities are interlinked and business perspective should be present already in the FEI and in this way the pursuit of innovation. Still, it might feel controversial to use the word innovativeness to describe the innovative capability in the FEI. We are sticking to using this concept, because the word inventiveness, which implies a focus to the beginning of the innovation process, refers to the ability to create patents [43] and we wish not to limit our concept of innovativeness in the FEI to those ideas aiming for a patent. Creativity on the other hand is an insufficient concept, because it refers to the production of novel and useful ideas. We are however interested also in the way they are developed after presentation and taken forward in the organisation (until the beginning of the NPD project).

3 THE IMPORTANCE OF THE SOCIAL CONTEXT – IMPLICATIONS OF A CASE STUDY

There have been many descriptions of highly innovative companies in innovation literature. These descriptions serve the listing of antecedents for innovativeness and act as examples to strive towards for the companies which are not that innovative themselves. My interest is to try to understand how a company which is not among the most innovative at the moment can strive towards a more innovative state.

The setting of our research is a large, globally operating technology company. This originally Finnish company is today listed publicly and has offices in several countries. This company provides technology and services within a traditional process industry which values security and high technology with high quality. The company has been successful and is at the moment of our study experiencing a substantial boom in its business. The situation is however challenging for innovativeness, for there is pressure to "reel in" the profits. This has led to increased time pressure from sales and delivery projects. The company is among the technology leaders in its business and needs innovation in order to maintain its market position. The motive for undergoing this action research project is the worry of the RTD (Research and Technology Development) management of the company that not enough attention is directed in innovating. They also believe that there should be more ideas that could be further developed into innovations. Our first research task was to explore and diagnose the present situation of innovativeness in one chosen division located in Finland. It develops some of the key technologies of the company and is considered to be one of the more innovative divisions in the company.

The data used in this paper consists of 15 interviews, document analysis and discussions with the company's vice president of research and technology development (RTD) and the vice president of human resources. The interviews were semi-structured and they were recorded and transcribed. After the interviews a workshop was held together with the interviewees where the results of the first cycle were discussed and further action planned. The research is conducted as action research, and the

results presented in this paper represent the outcomes of the first (seven month) cycle of a two year longitudinal study. The purpose of this cycle has been to diagnose the main factors inhibiting and supporting innovativeness. The diagnosis has been made in collaboration with organisational actors and the interviews as well as the discussions with the vice presidents have acted as interventions within the organisation aiming for the recognition of the current situation, adding to their understanding of innovativeness, and finally, the empowerment of the interviewees.

3.1 Social constructions of innovativeness

In our research we found several implications of the importance of the social context to innovativeness. The first was the perception of innovativeness. As Csikszentmihalyi [15] has proposed, the cultural domain defines what is perceived as being creative or innovative. Most of the individuals did mention a diversified set of factors when asked 'what is innovativeness'. These factors included e.g. questioning, improvement, renewal, courage and problem solving. Most of the interviewees also mentioned that innovativeness can be directed to various ends, such as ways of work, processes and products. However, when talking about their work and innovative individuals in the organizations the concept of innovativeness was almost exclusively limited to technological inventions striving for patents. The reasons for this kind of conception of innovativeness can be understood through the educational and vocational background of the organisation members. The majority has received a technical training in somewhat same domain and worked within this company or in a similar field for practically whole of their careers. Few of the interviewees had come from a different vocational setting, and they told having faced with negative feedback when presenting views that differed from the perspective of this organization. The individuals were well networked around the globe, but even then people with somewhat similar mindset (customers, colleagues) Even though the individuals are aware of the multifaceted nature of innovative behaviour, in their own organizational context they bring to practice only the concept of technology-related innovativeness. Ideas in this domain are considered as valuable and appropriate and they are more likely to find support. The cultural resources (knowledge, practises, problems and instruments) provided by the social domain are technology-related and the variation outside the technology domain is at risk to be neglected by the field.

In addition, innovativeness was perceived as dealing with something extra-ordinary and outside one's normal work tasks. Innovative activities were seen to take place separate from the normal work practices and interaction. The interesting issue here is that the work of these interviewees consists mainly of developing new technologies or solving problems related to customer projects. From our perspective these individuals seem to be constantly engaged in innovative activities. Why do they not perceive their own work innovative? Most likely, because in their domain the measure of innovativeness is patents, which means that having time for innovation means having time for introducing and promoting ideas that result to patents. Each of the interviewees said to be highly motivated towards innovation activities and that creative behaviour was in their nature, so they did see themselves as being innovative – not just relative to their normal work practices.

When conducting our interviews we were surprised by the high variation in the perceptions of the innovativeness of the company. Some individuals felt that the company was very innovative and the presentation of divergent views is welcomed, whereas others felt the very opposite (most of the opinions falling somewhere between these two extremes). When analysing the interview data we noticed that the differences were best explained by the social context of the interviewees i.e. by the product team in which they belonged to. When individuals stated that their team had a good atmosphere, they also perceived the company as being more innovative and supportive related to innovative behaviour. This is most likely due to the fact that when the individuals themselves can more easily present ideas and get support for their championing, they experience that the company as a whole values innovation and strives towards it. On the other hand, the individuals which belonged to a social group with a less supportive atmosphere experience the reverse affect and are less certain of the company's innovative potential. The large diversity between the perspectives is increased by the low controlling effect of the formal processes. The company management has introduced many management and innovation processes, but their integration in the organisation is weak. The interviewees felt that the communication of strategic issues has been scarce and/or unfocused and thus their understanding of the company's strategic direction was relatively weak.

3.2 The significant role of informal networks and group social support

When talking with the interviewees of the way they introduce and develop new ideas, it became clear that personal contacts and social support from group have a strong role in innovative activities. Individuals reported having ideas in various situations, e.g. when trying to solve a problem for the customer, when having a feeling that something could be done in an easier way, or on their free time, and they didn't necessarily need other persons for that. Group/team situations were, however, also reported as being good for ideation provided that there was sufficient time for ideation and positive encouragement by the group members. In fact, when asked for the most important factors supporting innovative activities, the group/team support was voted (in the workshop) clearly as the most significant. The strong personal ties in the organization were described as especially important in the development part. Before presenting their ideas, especially the wilder ones, to a wider audience, the individuals tended to discuss them with a trusted person in the organization in order to get preliminary feedback before putting oneself at risk with a team, supervisor or an organizational databank. The personal relations also helped the individuals in acquiring complementary knowledge for developing their ideas, when without these contacts they would have not known who to turn to or they would have been put 'in the back on the line' and had to wait when following the formal processes. In the latter case many reported that the idea would have not been developed at all, because of the delays in the process causing loss of momentum and enthusiasm. In this case the strong ties between the individuals allows the sharing of ideas (mutual trust), the sharing of complex knowledge and saving time by not having to follow the official processes. But there would also be a need for more versatile weak ties between different functions and even preferably outside to organization. At the moment the organization has a strong knowledge base and open exchange of information, but what is missing are the different perspectives and controlled conflicts of different mind-sets. Too uniform a perspective of the nature of the problems that the individuals are setting out to solve limits the explorative nature of the front-end activities.

The literature of FEI relative to social aspects has concentrated on the management of a front end team. In our study the group level has shown to be important, but it has proven quite difficult to point out FEI-teams, for individuals are working in various and constantly changing teams. In addition ideas are not necessarily born from planned FEI-activities but e.g. in the middle of daily project work. For this reason I think that the research of FEI activities in teams should not be limited to official (preferably cross-functional) FEI teams, but to consider the role of "normal teams" and the way their innovative activities can be supported and utilized by the company. Also the role of informal networks and communities of practice seem very important for successful FEI activities, which is why they should be looked at more closely as well as the way the management could support their existence.

3.3 The next step– concentrating on the group dynamics

This paper represents the results of the first cycle of a two year action research project. In the next cycle of our action research project we focus our attention to the group level, because we feel it offers us a small enough unit to reach concrete activities and interaction, and yet provides the possibility for the transfer of best practices from one group to another, thus resulting into a more innovative work community. Our research interest is first to identify the everyday work practices of the individuals and the way innovative behaviour is linked to them. Second, we wish to conduct further research on the meaning and nature of innovativeness to the group members. Our third interest is to deepen the understanding of the way the social context is present in the front end of innovation and how it affects different innovative behaviours. During the second cycle we will strive to collect deeper data utilizing ethnographic methods, such as observation and unstructured interviewing, and acquire more understanding on the way the social processes of a group influence innovative behaviour.

During this phase of in-depth research we will, after acquiring sufficient knowledge of the reality of the group members, plan an intervention that will facilitate the group's innovative activities. The intervention is only possible if the group is motivated to do so. All research as well as possible intervention is discussed, planned and decided in collaboration with the group members and our contact persons. The action must be taken by the organisation members – the researchers can only act as facilitators.

4 CONCLUSIONS

The front-end of innovation is the most creative phase of the innovation process due to its explorative

and unorganised nature. In this phase it is desirable to present divergent ideas and engage in out-of-the-bow thinking. This type of activities, and all the innovative behaviours present in the FEI, require courage, motivation and a multitude of skills from the organisational actors and cannot be taken for granted. The role of the social context of the organisation in either supporting these activities or inhibiting them is considerable. What is even considered to be a novel and useful idea and what is innovativeness is socially constructed in the social domain of the organization. In the production of ideas the group support, as well as the support from trusted individuals from personal, informal networks are highly important. The management should communicate strategic direction and provide processes in order to facilitate the innovative activities of the work community, but these should not limit the existence of social networks and communities of practices in the organization. Management should seek ways to support these ways of acting relative to innovativeness in the front end of innovation. At the current time many companies are introducing software solutions for the ideation activities in the very beginning of the FEI. According to our study this may be a very difficult and delicate way for getting individuals to introduce new ideas, because there is a strong need for trusted human contact before the idea is presented to a wider audience. The software solutions that help to store the ideas, distribute them to others (and the management) in the company and enable the online development for ideas can be of great assistance if they only are adjusted to the ways of action that are comfortable for the individuals. There should always be a possibility and encouragement towards social interaction even though processes and software tools would be introduced to facilitate innovative activities.

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