CHALMERS

A Framework to Assess Organizational Creative Climate

Master of Science Thesis in the Master Degree Program, Quality and Operations Management

PATRIK AXELSSON
NARGES SARDARI

Department of Technology Management and Economics
Division of Management of Organizational Renewal and Entrepreneurship
CHALMERS UNIVERSITY OF TECHNOLOGY
Göteborg, Sweden, 2011
Report No. E 2011:022

REPORT NO: E 2011:022

A Framework to Assess Organizational Creative Climate

PATRIK AXELSSON
NARGES SARDARI

Examior: Tobias Fredberg

Supervisor: Anna Yström

Department of Technology Management and Economics
Division of Management of Organizational Renewal and Entrepreneurship
CHALMERS UNIVERSITY OF TECHNOLOGY
Göteborg, Sweden, 2011

A Framework to Assess Organizational Creative Climate

PATRIK AXELSSON
NARGES SARDARI

Report No. E 2011:022
Department of Technology Management and Economics
Division of Management of Organizational Renewal and Entrepreneurship
Chalmers University of Technology
SE-412 96 Göteborg
Sweden
Telephone + 46 (0)31-772 1000

Göteborg, Sweden 2011

Abstract

In order to increase the competitiveness, organizations need to utilize the creative potential of their employees. One of the best ways to utilize this potential for organizational benefits is to create a climate that nourishes creativity. A climate consists of many attributes and can be seen as the manifestation of the organizational culture. Some of these climate attributes have the ability to affect organizational creativity. The intention of this paper is therefore to provide an understanding, in the form of a model, of what attributes constitute a creative climate and thus illuminate in what ways organizations can improve regarding organizational creativity.

In order for organizations to improve it is fundamental to assess the present climate and determine how it ideally should be. To facilitate this we have in addition to the model designed a checklist that can be used to assess the creative climate within an organization or organizational unit. The model and the checklist are mainly designed for management consultants to use in their clients' organizations.

The creative climate attributes were identified through literature studies and empirical data gathering. The attributes were then grouped and categorized, leading up to a three-layer model, called the Category-Element-Attribute Model, that describes the different building blocks of a creative climate. On the broadest level, our findings suggest that an organizational creative climate can be divided into eight different categories: work characteristics, management support, co-worker support, safety, resources, diversity, dynamism/risk-taking, and organizational systems and processes.

The Checklist was mainly based on input from the Category-Element-Attribute Model and suggestions from our case company on how to make it a practically useful tool. It consists of 29 questions for the consultants to consider when assessing a creative climate. It also provides an opportunity to determine the influence of certain creative climate dimensions as well as a suggested data gathering method. Together, the Category-Element-Attribute Model and the Checklist constitute the framework for assessing an organizational creative climate. The framework is a basic tool and in no way all-encompassing and could therefore be enhanced as a result of further research.

The research has been conducted in close co-operation with Ekan AB, from where we have collected empirical data and suggestions regarding the practical usability of the framework.

Key words: creativity, organizational creativity, creative climate, assessing a creative climate

Acknowledgements

First of all we would like to thank our examiner, Associate Professor Tobias Fredberg, for taking on this thesis and made it at all possible. We are also grateful to all people in Ekan who have lent their time and knowledge to assist us in our work. Special thanks go to Malin Wennebro, our supervisor at Ekan, for providing valuable input and coordinating the co-operation between Ekan and us. Finally, our warmest thanks go to our supervisor at Chalmers, Anna Yström, who has assisted us throughout this research and tirelessly has provided input and encouragement that truly have enhanced the result.

Table of contents

1 Introduction 1
1.1 Background 1
1.2 Purpose and research questions 3
1.3 Ekan AB 3
1.4 Scope and delimitations 3
2 Theory 5
2.1 Definition of creativity and innovation 5
2.2 Definition of climate 8
2.3 Creative climate attributes 9
2.4 Assessing a creative climate 18
3 Methodology 22
3.1 Research strategy 22
3.2 Data collection 23
3.3 Data analysis 27
3.4 Trustworthiness 29
4 Empirical findings 31
4.1 Interviews: The creative climate attributes 31
4.2 Focus group at Ekan: Assessing a creative climate 38
5 Analysis 41
5.1 Categorization: The creative climate 41
5.2 Assessment: The Checklist 57
6 Final results 59
6.1 The Category-Element-Attribute Model 59
6.2 The Checklist 62
6.3 The Gap-Influence Diagram 68
7 Discussion 70
7.1 Categorization: The Category-Element-Attribute Model 70
7.2 Assessment: The Checklist 71
7.3 Framework limitations 74
8 Conclusions and further research 75
9 List of tables 76
10 List of figures 77

11 List of references 78
12 Appendices i
12.1 Appendix I: The path model of organizational creativity i
12.2 Appendix II: The interview guide ii
12.3 Appendix III: The focus group guide iii
12.4 Appendix IV: The interviewees iv
12.5 Appendix V: Wheel of Creativity v

1 Introduction

In this Chapter the background of the study, why the research is of interest and what the report contains are described. This includes the purpose of the research, research questions and scope, and a presentation of the cooperator company Ekan AB.

1.1 Background

Organizational creativity as a research field has its breakthrough in the late 1990's (Zhou and Shalley, 2008). The increased interest for organizational creativity was likely related to how the global market had developed over the last few decades. According to Cummings and Oldham (1997), the global competition becomes greater and technologies change at an ever-increasing rate. Anderson (1992) argues that creativity has the potential to provide organizations with a competitive advantage. D'Aveni et al. (1995) stresses that in today's global competition, Goliaths are defeated by clever Davids. Ackoff and Vergara (1981) elucidate the need for creativity with the decreasing possibility to use previously used methods to solve problems, since many of them have no precedents.

The notion that creativity and innovation is a key attribute in order to gain competitive advantage is supported by Cook (1998) as well as Magadley and Birdi (2009) who further point to the importance of creativity for organizational survival. Cook (1998) cites the Corporate Research Foundation (1996) that presents a list where structural flexibility and innovative power are the most important key drivers of future success in UK's top 100 companies. According to Cook (1998), structural flexibility and innovative power are at the core of creativity. Andriopoulos (2001) recognizes the importance of continuous improvements in order to compete in today's marketplace. He sees creativity as a way for organizations to deal with this challenge, as long as it is aimed at long-term improvements instead of quick fixes to current problems. However, as Roffe (1999) notices, creativity and innovation are not only strived for because of the influence of global forces, but they also offer internal benefits for an organization. Cummings and Oldham (1997) share this opinion by arguing that innovation must take place not only in the products and services companies offer, but also within their own organizations in order to become more efficient.

Although innovation is sometimes used interchangeably with creativity, we adopt an approach that distinguishes creativity and innovation and defines innovation as successful implementation of creative ideas. Creativity and innovation is not something that just occurs; it is the organizations' employees that make it happen (Amabile and Conti, 1994; Cummings and Oldham, 1997). Employing highly creative people is therefore desired by most organizations (Sternberg et al., 1997). Research has shown however that it is not enough to just hire creative people and then hope for creative results; employees must be surrounded by an environment that fosters and brings out the creativity from within them (Amabile et al., 1996; Cummings and Oldham, 1997).

This notion is also shared by Isaksen and Ekvall (2010) who state that innovative behavior lies partly in how the organizational climate is constructed. Amabile (1997), who argues that *intrinsic motivation* has a major influence on creative behavior, urges organizations to adjust their climates so that they appeal to the intrinsic motivation of their employees.

Bharadwaj and Menon (2000) argue that an organization can be creative even if it comprises of typically low-level creative employees, as long as there exists organizational creativity mechanisms that nourish creative behavior. According to Cook (1998), creativity is 80 percent work context and only 20 percent technique. The implication of this is that popular creativity training programs for employees may be fruitless if an appropriate context is not provided (ibid). These ideas are the drivers that justify the effort to identify what it is in the environment, or climate as we will call it, that affects organizational creativity. This is also why we in this thesis will have an organizational perspective and not an individual one when it comes to creativity. Hence, we are interested in the influence of creativity on the workplace.

Further, creativity implies risk-taking since creative ideas in their nature are novel and have not been tested before (Sternberg et al., 1997). In order to succeed with these creative ideas, the organization and the people within it must dare to invest in these unknown paths (ibid). Another important aspect of creativity is the role of the organization's managers (Williams, 2001). According to Williams (2001) there is an increasing agreement that managers can affect their subordinates' creativity. Risk-taking and managers' role are however just a fragment of what initiates creativity in an organization. Many more, including job design (e.g. Farr, 1990; Cummings and Oldham, 1997), support (e.g. Ekvall, 1996; Zhou and George, 2001), diversity (e.g. Cummings, 1965; Amabile, 1998), safety (e.g. Anderson et al., 1992; Dutton, 1996), resources (e.g. Amabile, 1998; Ohly et al., 2006), dynamism (Anderson et al., 1992; Ekvall, 1996) and structures and systems (e.g. Andriopoulos, 2001; Williams, 2001), are all parts of the creative climate and will be presented in more detail further on in this report.

Improvements of the organizational creative climate are likely facilitated by an assessment of the current creative climate. Assessing the climate and identifying the deficient areas is therefore the first step to improve it. Consequently the aim of investigating the climate attributes is to develop a method by which the current climate of an organization can be assessed. The most frequently cited existing methods to do this from our literature studies are Amabile et al.'s (1996) KEYS and Ekvall's (1996) CCQ. Both of these are quantitative methods in the form of questionnaires and therefore have inherent strengths and short-comings, which will be discussed further on in this report. There also exist more qualitative methods for assessment purposes. These qualitative methods, as well as KEYS and CCQ, have inspired our work and shown alternative solutions for how to create a creative climate framework. Yet, in designing the present framework we tried to add additional depth to the existing methods.

1.2 Purpose and research questions

As the 1.1 Section implied, there is a need to understand what constitutes an organizational creative climate and to be able to assess to what extent the own organization is enhanced in those creative climate building blocks. Taking into consideration the amount of effort and time that is required to create a framework that completely encompasses this problem definition, this thesis aims to provide a foundation for such a framework, which later can be enhanced. The purpose of this thesis is therefore:

> *To lay the foundations of a framework that can assess an organizational creative climate.*

In order to reach the purpose, two main research questions were developed that directed the efforts of the research:

> *What attributes contribute to a creative climate within an organization?*
>
> *How can the contributing attributes of the organizational creative climate be assessed?*

By the end of this report we hope that we have been able to convey our answer to these questions to the reader.

1.3 Ekan AB

For additional input to complement theory, we have been co-operating with Ekan AB (henceforth Ekan). It is a Swedish management consultancy company founded in 1985 with the headquarters in Gothenburg and an additional office in Stockholm that was opened in recent years. Ekan employs around 30 people and has a turnover of approximately SEK 40 million. The competence lies in management, business development, and systems. Ekan works both with the private and public sector and the clients are from a wide spectrum of businesses, including industries, service companies, healthcare organizations, municipalities and real-estate companies. Ekan was chosen as partner company in this study because of the consultants' competences and experiences in dealing with a wide variety of businesses and organizational issues. Since much of Ekan's work is related to change, we also assumed that they themselves possess creative abilities and are familiar with the concept. Ekan consultants are the initial intended users of the framework and their role in this study has therefore been to provide empirical data and improvement suggestions for the framework development.

1.4 Scope and delimitations

In order to develop the framework we have mainly used already existing theories but have complemented these with empirical data. Further validation through testing of the framework is not within the research scope. In addition, the scope is limited to organizational creativity and the creative climate. This means that individual and group

creativity as well as culture have not been treated in particular depth. The empirical input to the study has been collected through interviews and a focus group session at Ekan, while the studied literature stems from several different countries, mainly the U.S. The implications that national culture may have on the view of creativity and climate have not been considered.

2 Theory

The Theory chapter starts with definitions of creativity, innovation and climate. Following that is a section with relevant theories found in previous research regarding the components of a creative climate. The chapter ends with theory regarding assessment of a creative climate.

2.1 Definition of creativity and innovation

As is the case with many other concepts, not all authors agree on a uniform definition of the creativity concept, especially within the organizational context. Also, the creativity studies vary extensively in relation to adopting psychological and cognitive perspectives of individual creativity, contextual group and organization creativity perspective or creativity models adopting systematic view to combine perspectives. Yet, according to the scope of this research, after presenting psychological and individual definitions of creativity at a glance in order to understand the building blocks of organizational creativity, the rest of the chapter is dedicated to the definition of organizational creativity and its link to innovation.

According to Ghiselin (1963), described by Ekvall (1997, p. 195), the psychological description of creativity is "a new structure of the mind, a new configuration or a new formulation of meaning". De Bono (1995), who has conducted prominent research on the creativity generating mechanism of the brain, defines "lateral thinking" as a creative thinking process of the brain. He describes that the incoming information to the brain is organized in certain patterns, and lateral thinking means cutting across these patterns. According to Ekvall (1997), the mental procedure that leads to a creative output contains connecting or combining elements of knowledge that were not previously linked. Ghiselin (1963) also mentions that improving the usage of an existing body of meaning is also called creativity.

Many researchers are interested in creative results within the business world, which is called business creativity by Amabile (1998). This is discernible in many of the encountered definitions. Amabile (1997) focuses on two core aspects in describing creativity, which are novelty and usefulness. An idea which is both novel and useful, in any domain of knowledge, is called creative (ibid). This definition is prevailing among researchers in organizational creativity (e.g. Mumford and Gustafson, 1988; Scott and Bruce, 1994; Sternberg and Lubart, 1999).

Oldham and Cummings (1996) refer to novel ideas as the ones that involve a significant recombination of existing materials or a completely new idea. Yet, any unusual idea is not evidence of creativity. The creative idea should fit the situation or the problem (Amabile 1997). Ford (1996) also adopts the definition which is based on the novelty and usefulness of the result. However he emphasizes that the judgment of the novelty and value of the output of certain actions is domain-specific and subjective.

Drazin et al., (1999) look at creativity from several levels. At the individual level and from a sense-making perspective, they define creativity as the involvement in a creative

process or act. They believe that instead of a static output-oriented approach, creativity should be viewed with regard to the time factor. As a result, creativity is defined as a "person's psychological engagement in creative activity" (Drazin et al., 1999, p. 301).

Amabile (1997) proposes a componential theory of individual creativity, through which she elucidates the three main components of individual (or small teams) creativity. According to Amabile (1997) the interaction between individuals' expertise, creative-thinking abilities and motivation is what make creativity occur. The individual's knowledge in the field enables him or her to consider broad spectrum of alternatives to solve problems (ibid). Yet, being a highly skilled person in a field does not lead to generating creative ideas unless one has the ability to think creatively and to look at issues from different points of view, according to Amabile (1997). These two components refer to the capability of the person to be creative. However without motivation, the potential capability of the person will not come to reality. It could be in the form of both intrinsic and extrinsic motivation although intrinsic, which means having inside interest and passion about the work, has a greater impact on creativity, according to Amabile (1998).

Drazing et al. (1999) distinguish between individual, group and organizational creativity in a multilevel model. Apart from Drazin et al. (1999), other scholars, such as Csikszentmihalyi (2009), also developed models to explain organizational creativity by adopting a system approach. According to Csikszentmihalyi's (2009) model (DIFI), organizational creativity emerges as a result of the interaction among individuals with domain and field. Domain refers to the knowledge setting that has its own procedures and rules in the organization while field refers to the gatekeepers that set the structure of the domain and also choose the creativity that is determined to be beneficial for the organization (ibid). Woodman et al., (1993) suggest a model to explain how individual creativity transforms into group and then organizational creativity in order to form a creative output. However, the system approach towards creativity as such is outside the scope of this research.

Although creativity is the result of an individual's psychological process (Ghiselin, 1963 in Ekvall, 1997) and rely on individual capabilities of people, the role of contextual attributes within the organization, such as the influence of leadership, the type of tasks and also behaviours of co-workers towards each other, can't be dismissed (Oldham and Cummings, 1997). Furthermore according to Oldham and Cummings (1997) the individual abilities can contribute to the creative output of an organization if the context of the organization is set to accept and foster creativity. According to Drazin et al. (1999) organizational-level creativity is not just a sum of individual contributions, but it is a creative process in which diverse groups that have interests negotiate. Organizational creativity is defined by Woodman et al. (1993, pp. 293) as "The creation of a valuable, useful, new product, service, idea, procedure, or process by individuals working together in a complex social system". Cook (1998) describes organizational creativity as a process by which creativity turns into innovation, and finally to benefit for the organization.

As one can learn from the organizational creativity definition by Cook (1998), in order to explore the definition of organizational creativity in the literature, first the definition of innovation should be investigated. There is a discussion in the literature regarding the difference between creativity and innovation and the link between them. Some authors have a definition for innovation similar to the aforementioned definitions of creativity (e.g. Luecke, 2003), whereas others make a clear distinction between these two concepts. They (e.g. Ekvall, 1997; Isaksen and Ekvall, 2010) believe that the distinction between innovation and creativity is that in order for an act or product to be called innovation, the creative idea needs to be brought into application. According to Amabile (1997, p. 40) the "successful implementation of those novel, appropriate ideas" is called innovation.

The relation between creativity and innovation according to Amabile et al. (1996) is that any new program, product or service to be implemented successfully, needs an initial creative idea; "All innovation begins with creative ideas" (Amabile et al., 1996, p. 1154). Other authors share the same view and see creativity as a prerequisite of innovation (e.g. Paulus and Nijstad, 2003 in George 2007). Ford (1996) also agrees that, through a complicated process, a creative idea leads to an innovation. Oldham and Cummings (1997) describe individuals' creativity as raw material for innovation. Individual creativity is the novel and useful idea, procedure or product, which is generated by the individual and will be implemented in order to become an innovation (ibid).

According to Woodman et al. (1993) organizational creativity is a subset of innovation; this means that although they share Amabile's (1997) view that implementation of novel ideas is innovation, they also argue that innovation does not necessarily need to comprise creativity, but could be the adaptation of something that already exists outside the organization. This is close to what Amabile et al. (1996) argue, that while creativity is a necessary condition for innovation, it is not a sufficient condition.

Organizational creativity mechanisms are defined by Bharadwaj and Menon (2000) as established procedures that organizations put into operation in order to enhance and encourage ideas or results, which are novel and useful. While they differentiate between individual and organizational creativity mechanisms, the findings of their research confirm that the presence of both kinds result in the most prominent innovative performance. However, innovative performance is also significant in organizations that adopt organizational creativity mechanisms, even without established individual creativity mechanisms.

Based on the studied literature and the output perspective of this report, the definition used henceforth for creativity is that:

> *Creativity is the development of new and useful ideas. Innovation is the successful implementation of these.*
>
> *Organizational creativity is the act of creativity that takes place as the result of the interactions within a complex social system.*

2.2 Definition of climate

According to Isaksen et al. (2001), individuals have certain perceptions of the behavioral patterns in an organization. The aggregation of those perceptions is called organizational climate (ibid). The climate is "the recurring patterns of behavior, attitudes, and feelings that characterize life in an organization" (Isaksen et al. 2001. p172).

Schneider et al. (1996) state that individuals perceive two main aspects through climate. The first is how work is actually carried out in the organization. The second is what goals and aims the organization follows. According to Schneider et al. (1996), individuals make perceptions regarding the two aspects through procedures, policies and practices. The rewarding system and encouraging treatments also show the preferable patterns of behavior to individuals. Individuals infer from the climate what to value (ibid).

Watkin and Hubbard (2003) also mention the perception of individuals and define climate as a measure of what employees perceive from the environment regarding how work should be done. Schneider (1987) also addresses the climate as the way by which members of the organization comprehend what is important for an effective organization.

There is a discussion in this area regarding the difference between culture and climate that is worth mentioning for the sake of clarity. According to Martin (2002), culture refers to underlying assumptions, beliefs and values, and studying culture requires deep investigation in a wide range of human affairs within the organization. Isaksen et al. (2001) state that climate is observable whereas, according to Schneider et al. (1996), culture is deeper, more lasting and less observable. As a result, according to Schneider (2000) cited in Isaksen and Ekvall (2010), since climate is observable through interactions and behaviors, it is regarded as a less abstract concept compared to culture.

In his study of the difference between organizational climate and culture, although Denison (1996) also agrees that climate is rooted in the organizational values, he adds to the previous points that climate studies are more concerned with the influence that organization social systems have on members of the organization where as culture studies are more interested in the evolvement of those social systems during time. According to him, the climate-related dimensions are more controllable and consciously perceivable by organizational members.

As Schneider (1987) expresses, while climate addresses how organizations perform and what are valued and expected in the organization, culture is about the reasons why certain performances are expected and supported. Further, culture is the values that drive the organization to function in the certain way (ibid).

After reviewing the literature, Gray (2007) states another difference between culture and climate. According to him, culture can be approached from outside the context and as a group understanding, while climate is the feeling that individuals get from inside the environment. The subjective approach to the climate is also adopted by Amabile et al. (1996), where they intend to assess individual's *perception* of the work environment by

the KEYS climate assessing tool. However, Ekvall (1996) believes that although individual perception is the basis of the organizational climate, the climate is an objective aggregation of the shared perceptions of individuals. According to him, the absolute measure of climate dimensions can be assessed regardless of individual's perception. He adopts this perspective in his climate assessing tool, CCQ, as well.

A number of organizational climate aspects have been highlighted in the abovementioned descriptions by different researchers. The climate definition adopted in this report contains those highlighted areas, and is:

> *The organizational climate is the behavioral manifestation of underlying values, beliefs and assumptions of the members of an organization. The climate is perceived by members through organization processes and practices which provide an aggregated idea of how to function in the organization and what the organizational goals and objectives are.*

During further phases, the definition of organizational climate that is adopted in this research, as well as the distinction between climate and culture, pave the way to consider climate-related attributes in the theory as well as empirical studies, and exclude the attributes that do not contribute to organizational climate.

2.3 Creative climate attributes

In this section, the findings from the literature review regarding creative climate attributes are presented. The attributes have been placed under eight different headings, which are the categories created by us during the analysis process. Figure 1 shows the categories under which attributes are categorized. The categories have been used here for structural reasons but the process of creating them will be introduced in Chapter 3.

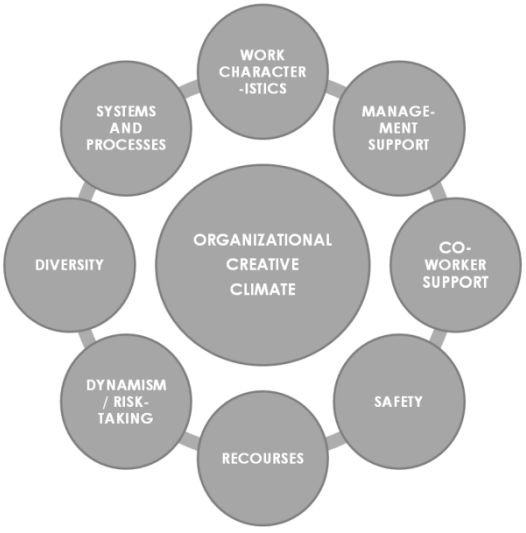


Figure 1 The eight organizational creative climate categories

2.3.1 Work Characteristics

Work characteristics refer to the properties of each employee's work that increase the likelihood of a creative contribution to the organization. According to Amabile (1998), matching people with the right assignments is one of the most effective ways to increase creativity. This means that people should use their expertise and creative-thinking abilities in their work, which in turn will increase their intrinsic motivation towards the task (ibid). She refers to this as *challenge* in her eight-scale model over what influences creativity. The degree of challenge is of great importance however, since a too challenging task can make the person lose control (ibid). Ekvall (1996) also refers to challenge as influencing the creative climate but describes it as "the emotional involvement of the members of the organization in its operations and goals" (p. 107). Cummings and Oldham (1997) identifies *job complexity* as a creative climate attribute. According to them a complex job requires a variety of skills and talents. Farr (1990) presents a similar attribute which he calls *enriched jobs,* meaning that employees are required to do more thinking, which increases their creative abilities.

Through a literature review, Gray (2007) presents a model over the dimensions of a creative climate of an organization and concludes that participation in defining goals and objectives is contributing to a creative climate. Participation is also advocated by Cummings (1965) who further points out the importance of autonomy in the work.

Autonomy is closely related to freedom which both Amabile (1998) and Ekvall (1996) refer to as contributing to creativity. Amabile (1998) defines freedom at work as the liberty in deciding how to perform a task but not necessarily the outcome of it. She even argues that clear goals enhance the workers creativity as long as they can decide how to reach them. Ekvall (1996) holds a similar view regarding freedom but defines it as "the independence in behavior exerted by the people in the organization" (Ekvall, 1996, p. 107). Feurer et al., (1996) also mention freedom, but from a more narrow perspective as freedom to experiment. This view is also shared by Farr (1990) who states that employees should feel free to experiment with new ideas. He includes this in his enriched jobs attribute. Cummings and Oldham's (1997) job complexity attribute also includes a freedom aspect in that the employees are provided with freedom when determining the way the work is carried out.

Further developing the involvement in goal setting previously discussed by Gray (2007); Anderson et al. (1992) also illuminate this importance in their four-attribute theory of team innovation. In addition, according to them, a vision needs to be shared and negotiated among the employees if they are to produce an innovative result. Amabile (1998) claims that a sense of mutual purpose is central to intrinsic motivation. The vision must also be clear and possible to change (Anderson et al., 1992).

There are also some obstacles to creativity. An obstacle is defined as something put in place that affects creativity negatively, even though this could be done unintentionally. The *lack* of previously discussed creative climate attributes is not seen as obstacles

towards a creative climate however, as no specific hinder exists. C*ontrol* is one obstacle towards a creative climate with regard to work characteristics. Sternberg et al. (1997) and Rasulzada (2007) talk about control as a way for organizations to try to cope with the uncertainties inherited in the creative process. In a controlled environment, creative employees are often met with skepticism and resistance (ibid).

2.3.2 Management Support

Management support is a broad category and involves all activities conducted by managers that influence organizational creativity. Although much of what goes on in an organization could be argued to stem from management decisions, this category exclusively contains attributes that are the direct responsibility of managers as well as managerial behavior. This category also contains some attributes that concern leaders (i.e. managers and leaders both occur in this category, even though they are not used interchangeably neither in literature nor by us). According to Williams (2001), one of the key ways managers can influence their employees' creativity is by providing them with sufficient support and encouragement. However, as Anderson et al. (1992) conclude, management support for creative behavior is something that is often articulated in organizations, but seldom fully implemented.

Amabile (1998) also recognizes the importance of management support and has named one of her six scales of a creative climate, *supervisory encouragement*. According to her, most managers are very busy and many lack the ability to maintain a supportive attitude towards their employees over a long period of time. In order to nourish the intrinsic motivation that leads to creative behavior, managers must continuously recognize the employees' efforts (ibid). She further asserts that managers must also avoid questioning innovative behavior in a reactive manner but instead really consider the creative ideas. Supervisory encouragement also means that managers should act as role models for their employees (ibid). The positive influence of role modeling over creativity is also supported by Egan (2005).

Cummings and Oldham (1997) talk about supportive and non-controlling supervision as a means to spawn creativity. This notion is also shared by Egan (2005). Cummings and Oldham's (1997) definition of support is similar to what Amabile (1998) writes about and means that attention to employees' needs and feelings must be paid. Further the managers should encourage their employees to speak their concerns (Cummings and Oldham, 1997; Gray, 2007), provide them with positive and informational feedback, and assist them in developing their skills (Cummings and Oldham, 1997). Non-controlling means that managers should not closely monitor their employees; not make decisions concerning the employees without involving them; and not try to make employees feel, think or act in a certain way (ibid). If employees feel that they are being controlled in any of these ways, it will hamper their creative potential, according to Cummings and Oldham (1997). The notion of non-controlling behavior is closely related to the obstacle *control* discussed under Work Characteristics. As was mentioned however, this category

concerns the direct acts of managers, while the previous category, i.e. Work characteristics, was about the characteristics of an employee's work.

Roffe (1999) argues that employees should be provided with clear objectives and specific feedback, and that the employees' point of view should be considered by managers. De Jong and den Hartog (2010) found evidence that a participative leadership style increases intrinsic motivation and the generation and implementation of ideas among employees. Participative leadership means that subordinates are allowed and encouraged to take part in important decision-making (ibid).

Egan (2005) argues that a transformational leadership style affects subordinates intrinsic motivation positively which in turn supports creativity. Related to transformational leadership is Cummings' (1965) idea that a creative organization is partly characterized by the management philosophy of trusting employees and their capabilities. Finally, Egan (2005) proposes that creativity is supported if the set goals have a creativity orientation. Shalley (2008) agrees and states that setting creative-associated goals is a major way to encourage employees to be creative.

This category concludes with two obstacles to creativity by Quinn (1985). According to him, one phenomenon that inhibits technological innovation is an isolated top management. Isolation means low contact with workers and customers, which in turn may lead to misunderstandings and a risk-averse behavior since management is not familiar with the organization's technological capabilities (ibid). The other obstacle is the focus on short-term gains instead of investing in ideas that may lead to innovations, which usually requires a more long-term perspective (ibid).

2.3.3 Co-worker Support

Co-worker support is the willingness of co-workers to cooperate and help each other instead of creating a climate of secrecy. In their research about how the work context affect creativity, Cummings and Oldham (1997) stress the importance of stimulating co-workers. Such co-workers make one another feel more excited about their work and do not distract each other from it (ibid). This can occur by motivating each other, adding complexity, or the emergence of a healthy competitive environment (ibid). When work is carried out in teams, the issue of stimulating co-workers is something the organization must pay extra attention to (ibid).

Zhou and George (2001) were in their research able to provide evidence that co-worker help and support increase creativity. Help and support in that context refers to co-workers assisting a colleague by sharing knowledge, expertise and providing encouragement. A similar view is held by Cummings (1965) who emphasizes the importance of information exchange. Ekvall (1996) suggests *idea support* as a climate dimension increasing organizational creativity. This means that co-workers listen to each other's ideas and support them, giving rise to a constructive and positive atmosphere. Dutton (1996) elucidates how The Oz Creative Thinking Network teaches its members

different creative-thinking techniques and then deploys these people's knowledge throughout the organization in order to help others become creative.

An obstacle to creativity for co-worker support is *secrecy* (Cummings, 1965). Secrecy is put in contrast to the previous creative attribute discussed by Cummings, namely exchange of information. When secrecy prevails, each individual or sub-unit guards its own strategies and tactics in the pursuit of individual goals (ibid).

2.3.4 Safety

Safety contains the attributes necessary for organization members to feel safe when expressing their ideas. *Trust/openness* is another of Ekvall's (1996) climate dimensions and refers to a similar concept. He mentions the emotional safety that employees have to experience in order to fully express themselves. People should not be mocked because of their ideas and this requires a great level of trust among employees, he continues. Furthermore, if mistakes are not acceptable in the organization, the members may not take the risk of being creative and testing new ways because of the fear of making mistakes (ibid).

Dutton (1996) also recognizes the importance of creating a climate where it is accepted to fail in order to become more creative. George (2007) mentions the risky nature of creative ideas since their successful output is under question. Creative ideas also challenge the status quo and derive change within the organization and this might also generate resistance (ibid). George (2007) therefore argues that the organization must provide the employees with clear signals of safety in order to encourage creativity.

West (1990) argues that one of the conceptual psychological themes influencing organizational innovation is participative safety. This theme characterizes the environment in which people are invited to take part in decision-making processes while the interpersonal relations are non-threatening. Besides describing the positive influences of participation, West (1990) states how safety leaves a positive effect on the level of new ideas suggested. Individuals tend to put forth their ideas to a greater extent where they feel they won't be ridiculed or penalized. As a result, more creative ideas arise in a supportive non-threatening climate (ibid).

The role of participative safety is also supported by Anderson et al. (1992). They emphasize that in situations where participation takes place because of political reasons and power conflicts, creativity does not occur since people do not feel safe. Hence, safety is a prerequisite for an innovative climate (ibid). Regarding interpersonal relations, based on a study done by Jones and James (1979), friendliness and warmth is strongly associated with a creative climate. They define this instrumental attribute as warm relations and cooperation among organization members.

Roffe (1999) explicitly states *free expression of ideas* as a attribute that helps the generation of organizational creativity. Gray (2007) believes that people often have ideas regarding work conditions that may be useful in improving the work and they like to be

heard and treated well regarding their ideas. As a result, *free expression of ideas* is an attribute of a creative climate (ibid). Another attribute that assures tranquility of organization members, according to Gray's (2007) model, is *free expression of concerns*. Gray elucidates that each individual may experience distresses in their workplace. In a creative climate, these concerns are uttered freely (ibid).

Gray (2007) also states that any decision may overlook some aspects of the issue in question, and therefore the decision won't be as creative as it could have been if it had been challenged. Hence, obeying the rules without questioning them decreases the probability of novel ideas emerging. Thus freedom of questioning decisions, particularly by subordinates, is essential for a creative climate (ibid).

One more dimension of Ekvall's (1996) model related to safety is *playfulness/humor*. The dominant atmosphere of a creative climate is a "relaxed atmosphere with jokes and laughter" (Ekvall, 1996, p. 108). This is in contrast to a serious atmosphere in which humoring is considered as improper (ibid).

In his model, Gray (2007) mentions an obstacle to creativity, namely *purposive threats*, i.e. threats that are intentionally directed to specific individuals in order to make them behave in a certain way, or just by meanness. Another inhibiting attribute is *inappropriate judgments or criticism* (McFadzean, 2001). Since judgment of novel ideas may lead to censorship because of the fear of receiving negative criticism, many idea generation techniques do not allow judgment during the idea generation process (ibid). They instead evaluate ideas after the generation phase is over and as such, try to develop a safe atmosphere for expressing novel thoughts. Yet regarding idea evaluation, according to Cummings (1965), one of the characteristics of a creative organization is open information sharing and the norm of being open to constructive criticism, which might be hard to achieve in a threatening environment.

Moreover, Ekvall (1996) describes another obstacle, namely *conflicts*. He defines conflicts as emotional tensions between people who, as a result, dislike each other. Such a climate is characterized by plots and traps, gossip and slender (ibid). According to Amabile (1998), where politicking is prevalent, people do not feel safe regarding their work. Politicking, gossip and infighting leave negative influence on the level of creativity since they extract organization members' attention from the work (ibid).

2.3.5 Resources

Resources refer to the required time and money to nourish creativity. Williams (2001) states that experiments should be allowed and supported by enough resources to enhance creative results. When it comes to the time aspect, different researchers address it differently. Amabile (1998) argues that allocating a proper amount of time for creativity is a complicated task since a too tight schedule or impossible deadlines can have an inhibiting effect on creativity, while reasonable time pressure nourishes creative ideas by generating a sense of challenge. Hence, there should be a balance between time limits and slack times to both encourage a sense of challenge and allow the exploration of

new ideas. Cummings (1965) emphasizes time allocation when he elucidates that one of the characteristics of a creative organization is that members are evaluated, not in short time periods, but in the longest time span feasible for the economical survival of the organization.

Ekvall (1996) identifies *idea time* as being a creative climate dimension. He describes that initial ideas need discussion and further suggestions from others, which in turn requires time besides the planned routine schedule. In a case study of the 3M Company, Dutton (1996) mentions that employees are free to spend 15 percent of their work time on developing their personal ideas, even if the ideas are not part of the strategic business plan. This is what Dutton (1996) calls dream time and describes how it helped the breakthrough R&D projects to initiate. Girotra et al. (2010) add that just spending time on group discussions does not lead to high quality creative ideas. Instead a hybrid structure is needed in which individuals first spend time alone and then in groups (ibid). This means that time should allocate for both individual and team creative activities.

The research results of Ohly et al. (2006) lead to identification of a inverted U-shaped relation between time pressure and creativity. This curvilinear relation shows that, under time pressure, the activation of individuals rises until a certain optimum point is reached. Higher activation leads to higher stimulation and more creative solutions. Yet as time pressure exceeds the optimum level the activation and consequently, the generation of creative ideas decreases (ibid).

When it comes to financial resources, Amabile (1998) reasons that when funds are tight, the creativity of employees is directed towards finding more financial resources instead of exploring novel useful ideas. Thus, creativity needs sufficient financial support. However, Amabile (1998) states that this does not mean that the greater resources employees get, the more creative the organization will become. Therefore, a sufficient and feasible level of resource allocation must exist (ibid).

2.3.6 Diversity

In Amabile's (1998) climate scale *work-group features*, she lifts forth the importance of diversity in perspectives and backgrounds as an important contributing attribute to creativity. Useful and exciting things often emerge when people with different intellects and ways of working come together (ibid).

Cummings (1965) talks about diversity of opinions. According to Cummings, the creative person encourages his/her colleagues to come up with diverse opinions, since it facilitates idea generation. Roffe (1999) shares this opinion and argues that employees should be respected for the diversity each brings. Another dimension by Ekvall (1996) is called *debates* and refers to the encounter of different viewpoints, ideas etc. This promotes creativity since many voices are heard and there is less allegiance to established patterns (ibid).

Related to diverse opinions is the consideration of alternative solutions. An organization that wishes to be creative acknowledges that there is no "one best way" and therefore consider alternative solutions to the ones currently in practice (Cummings, 1965). Roffe (1999) concludes this category by proposing that intolerance of differences, i.e. to deny diversity, is an obstacle to creativity. Organizations that deny diversity become homogenous and label people who challenge the status quo as troublemakers (ibid).

2.3.7 Dynamism/Risk-taking

Dynamism/Risk-taking contains attributes that refer to a climate that can be called dynamic and risk-taking, which in turn urges creativity. *Dynamism/liveliness* is one of Ekvall's (1996) dimensions of a creative climate. He describes that this dimension refers to a situation in which there is always something new going on within the organization. The atmosphere provides a sense of urgency and speed, eventfulness and excitement. This stands opposite to the slow atmosphere that functions routinely (ibid).

Anderson et al. (1992) mention *climate for excellence* as an attribute of an innovative organization. They describe climate for excellence as an environment in which members strive for an improved and superior situation constantly. This is characterized by processes and personal attitudes that seek for continuous improvement according to Anderson et al. (1992). Here, the improvement is prior to fulfillment of organizational routine tasks. The result of such processes and attitudes is that creative ideas are born and challenged continuously and organization's functionality is affected by this cycle all the time in a positive way (ibid).

Risk-taking refers to the capability of the organization to handle the risks inherent to the unpredictable nature of creative efforts. It is about having creativity as a value in the organization and to encourage the employees to utilize creativity in their work. According to Sternberg et al. (1997) there is a certain level of uncertainty associated with creative projects and activities which the organization should not avoid, but instead manage. They express that although not all creative projects succeed, this is not a reason to avoid risk-taking creative experiments, because the failures will be compensated by a few successful breakthrough projects. Thus, the organization has to accept and manage the risks of testing new ideas (ibid).

Ekvall (1996) names *risk-taking* as creative climate dimension. He describes that when risk is tolerated in an organization, the decisions are made smoother and more opportunities are given the possibility to be examined. Dutton (1996), through a case study of the Coca-Cola Company, mentions the risk-taking culture as a necessary creative climate attribute. A creative organization provides a tolerant climate and conveys risk-taking signals through processes and practices (ibid).

Promoting employees to be creative means taking the risk to fail with new ideas or solutions. Yet despite the risk, Roffe (1999) emphasizes that one of the features of a climate open to creativity is precisely that people are encouraged to be creative and find new solutions. Egan (2005) also states that when creativity is valued in an organization,

employees' creativity flourish to a greater extent. Similarly, one of the barriers to a creative climate, based on Quinn (1985), is that the value of rational thinking exceeds the value of chaotic creative processes. Creative acts are often against systematic procedures of the organization. If acting strictly according to rules is encouraged more than development activities, creativity is being constrained (ibid).

2.3.8 Organizational Systems and Processes

The Organizational Systems and Processes category is about the explicitly established systems and processes of an organization, including organizational structures, which can influence the creativity. So how can an organization increase creativity in this way? Amabile (1997), in her *organizational encouragement* scale, mentions how an organization must put in place appropriate systems and procedures that facilitate creativity. The creative-thinking abilities of the employees is one part of the creative process (Amabile, 1998). Focusing attention to enhance these abilities might then increase the creative output (ibid). Birdi (2005) performed workshops in a UK organization, testing three different kinds of creativity-thinking methods; Business Beyond the Box, Lateral Thinking, and Six Thinking Hats. Birdi's (2005) study indicated that participants in the workshop improved their abilities to generate work-related ideas and to implement them. Dutton (1996) reports about how creativity training can help organizations to put stagnated projects back on track. Gordon (1985) identifies human resource development, i.e. the extent to which employees are given the opportunity to grow and develop within the organization, as a climate attribute.

Establishing social networks can be a way of sharing heterogeneous information and perspectives, which in turn increases creativity (George, 2007). To further nourish creative behavior, Williams (2001) identify the importance of establishing a system to properly evaluate employees' creative performance. Cummings (1965) also recognizes the evaluation function and emphasize that it should be separated from the idea generation function.

When it comes to organizational structure, several authors point to different ways it can influence creativity. Cummings (1965) highlights the benefits of a flat organization in that it increases the spans of control and minimizes strict direction from management. He also states that in an administrative hierarchy there is always the possibility to veto innovative ideas. The benefits of a flat structure is also supported by Andriopoulos (2001) who conducted a literature review in the field of organizational creativity. Further, Cummings (1965) advocates a flexible structure with low degree of formalization of workplace relationships. A similar view is held by Feurer et al., (1996) who claim that creativity is best achieved when there are small barriers to interaction.

There seems to be a common agreement that rewarding creative behavior will increase the likelihood of future creative output if the rewards leads to intrinsic motivation rather than extrinsic (e.g. Cummings, 1965; Amabile, 1998). Dan Pink even declares that using money as an extrinsic motivator will decrease the likelihood of creative performance

(TEDGlobal, 2009). Amabile (1993) note however that in some cases, extrinsic motivators actually enhance intrinsic motivation, which then would lead to increased creativity. The use of proper reward systems are also advocated by Roffe (1999) who states that there is a common understanding that recognition increases motivation and creative behavior. He further discusses two other obstacles to creativity related to this category: *vested interests* and *excessive bureaucracy*. Vested interests occur when people and sub-units within an organization rather see to their own interests than to the whole. Excessive bureaucracy implies strict allegiance to rules. The danger of a bureaucratic climate is also highlighted by Cummings (1965) who further talks about routine control and evaluation systems as impediments to creativity. He argues that these systems often rely on a stable environment that can be predicted, which is not the case when creativity is prevailing.

2.4 Assessing a creative climate

In the following section, two of the most frequently used and tested climate assessing methods, CCQ (Creative Climate Questionnaire) and KEYS (Assessing the climate for creativity), will be described. This is because the categorizations that were used in these methods inspired our framework development. Later in this part, a number of other methods for how to assess or improve a climate with regard to creativity will be announced. These were used in the framework development in order to suggest proper data gathering methods to assess the climate.

2.4.1 Creative Climate Questionnaire (CCQ)

Creative Climate Questionnaire, which will be called CCQ henceforth, is one of the few frequently cited and used tools to assess organizational creative climate. Ekvall (1996) developed this fifty-item questionnaire based on a ten-dimension model of the climate. Each five-question block of the questionnaire covers one of ten dimensions: Challenge, Freedom, Idea support, Trust/Openness, Dynamism/Liveliness, Playfulness/Humor, Debate, Conflicts, Risk-taking and Idea time. This categorization is based on studied theory, empirical findings and experience of consultancy in organizational psychology (ibid).

Some of Ekvall's (1996) ten dimensions, which are listed in Table 1 below, have already been elucidated earlier in Section 2.3. The linkage between them and our research will be highlighted in Chapter 5. Below a number of shortcomings of Ekvall's (1996) categorization mentioned by other researchers are presented. These were considered during the framework development in order to avoid the same problems. The results of Lauer's (1994) study show significant positive relationship among Ekvall's (1996) dimensions. Although this confirms the relation between the findings and their influence on the creative climate, very high amount of correlation means that the CCQ categorization should be improved in order to better show and convey the distinction between the dimension concepts (ibid). Mohamed and Rickards (1996) state that CCQ is a helpful tool to identify whether an organization's climate is creative or not. Yet, its diagnostics is too polarized in distinguishing high- or low-innovative firms, and the

precise extent to which the climate is creative cannot be determined by only using CCQ (ibid). They state that additional criteria or benchmarking should be utilized while using CCQ for more detailed results.

CCQ 10 Dimensions
Challenge
Freedom
Idea Support
Trust / Openness
Dynamism / Liveliness
Playfulness / Humor
Debates
*Conflicts
Risk Taking
Idea Time

Table 1 Ekvall's (1996) ten creative climate dimensions. The asterisk symbolizes that the attribute is an obstacle to creativity.

2.4.2 KEYS: Assessing the climate for creativity

KEYS is the other frequently used and carefully built climate assessing questionnaire. Amabile et al. (1996) present a construct validity study of the underlying model used to design the questionnaire. Eight environment scales build the questionnaire, six of which are *stimulant* scales and two are *obstacle* scales (ibid). The scales are presented in Table 2. The instrument is aimed to assess perceptions of the organization members regarding the work environment. It consists of seventy-eight items and four-point response scales (Mathisen and Einarsen, 2004). Relevant categories have been discussed previously in Section 2.3.

According to the results of Mathisen and Einarsen's (2004) study that examines the validity and reliability of the instrument, using the KEYS actually leads to the thorough evaluation of the people's perception of the climate. However they conclude that there is room for improvement of the categorization since the attribute analysis showed that many items of the questionnaire are loaded on to one climate attribute (ibid).

KEYS environment Scales
Organizational Encouragement
Supervisory Encouragement
Work Group Support
Freedom
Sufficient Resources
Challenging Work
*Workload Pressure
*Organizational Impediments

Table 2 Amabile et al.'s (1996) eight creative climate scales including two obstacles marked with asterisks.

2.4.3 Other assessing methods

The purpose of introducing the following assessing methods is that some parts of each were used in the framework developed in this research. They also contain data gathering methods that can be of use for the users of the creative climate assessing framework.

Moultrie and Young (2009) created a questionnaire combining CCQ and KEYS since they believed the two models covered complementary aspects of the climate. They also added questions to measure the importance of each attribute for creativity. Moreover, the findings of their study show that different dimensions of these models have relative importance in creativity. Therefore, in order to show that different attributes influence climate differently, Moultrie and Young (2009) argue that a hierarchical attribute model will provide better results.

Sundgren et al. (2005) develop a path model of creative climate, in which they investigate the impact of a number of drivers on the organizational creativity. The path model shows the relation among the variables, the most important of which are information sharing, intrinsic motivation and learning culture (ibid). The figure of the path model is presented in Appendix I. The idea of mapping the relation among the influential factors in a model is a constructive idea for how to use the output of the framework.

Anderson et al. (1992), as part of a major program of research about innovation and creativity at work, suggested a four-dimension model and practical methods and techniques for how to improve organizational creativity. The dimensions of their model were elucidated earlier, under Section 2.3. What is worth mentioning here is their practical program to improve the climate based on the model. They developed a checklist, called team innovation checklist, in which there is a set of questions for each dimension. During a team session, participants are asked to discuss the questions so that they realize

the status quo of their workplace environment and to find out improvement possibilities (ibid).

Piscopo (2008) reviewed two approaches to assess a creative climate. They are developed by *?What if! Innovation Company* and *International Center for Studies in Creativity* (ICSC) in order to be offered to their customers as part of their services. After studying these two assessing methods, Piscopo (2008) suggests his assessing method in a focal company.

According to Piscopo (2008), the assessment process of the ?What if! Innovation Company's proprietary tool, called Mirror, starts with a data gathering phase, in which management team members are interviewed. In addition, they gather data by holding focus groups in which the participants are cross-functional organization members (ibid). The results of this phase will later be presented associating clear illustrations to highlight the current situation and problematic areas of the organization (Piscopo, 2008).

The approach developed by ICSC is more structured than the ?What if! method, while at the same time more flexible regarding the customers' conditions (Piscopo, 2008). In the climate assessing phase, KEYS questionnaire may be used, as a quantitative tool, and structured interviews, as qualitative tools (ibid). It may be identified that the leadership assessment is also needed to assess the climate. If so, quantitative tools such as Leadership Practices Inventory may be utilized, and information gathered will later assist ICSC to develop an intervention plan to train organization members (Piscopo, 2008).

The holistic framework developed by Piscopo (2008) has several phases and includes qualitative as well as quantitative tools. Some parts are similar to previous methods. Yet an interesting data gathering method is suggested in this framework. According to Piscopo (2008), the implementers of the method train a cross-functional and cross-level group of people to explore creativity signs. The group will search for clues that show the current state of the creativity in the climate and they gather data via observations and/or informal interviews with people in the organization (ibid).

3 Methodology

This chapter outlines how the research was conducted and the epistemological and ontological standpoints. It provides a thorough description of the data gathering process and data analysis. The chapter ends with a discussion regarding the trustworthiness of the research.

3.1 Research strategy

In this research, the data gathering as well as data analysis methods were qualitative. Empirical data was gathered through semi-structured interviews and a focus group session, all at Ekan. The reason for this was that we were more interested in the actual words spoken by the Ekan consultants rather than some kind of numbers that are the result of a quantitative approach. A qualitative strategy pays more attention to the respondents' interests and what they believe is important, why deviance from the predefined questions is encouraged (Bryman and Bell, 2007). This is in line with our purpose of gathering data from Ekan respondents. We consider them as experts in the fields of change management and management model innovation in organizations. Therefore the aim was to ask about their idea regarding what attributes contribute to creative climate. Also because of their extensive experience in gathering data and evaluating their customers the focus group session was a collaboration to develop the assessing framework. According to Thomas (2006) the data gathered through a qualitative research strategy takes the form of meaning or texts derived from textual sources. This is in accordance with the data and data gathering methods of this research. Another reason why we have chosen a qualitative approach is that by translating qualitative data into quantitative data, there is the risk of losing some valuable information. To avoid this loss we decided to use qualitative data collection methods.

The consequence of adopting the qualitative approach was that after the interviews, climate attributes were extracted from what the interviewees believed constitute an organizational creative climate. Therefore the constructionism viewpoint is held as the ontological consideration in this research. Constructionism implies that social phenomena and their meanings are continually being constructed by social actors (Bryman and Bell, 2007). Moreover, the attributes obtained from the interviews were our interpretations of what they believe climate consists of and how they think it should be assessed. The model that was created based on those attributes was also a way to understand the organization climate in an applicable way. This implies that the epistemological consideration of this thesis, i.e. the way knowledge is viewed, is interpretivism. According to Bryman and Bell (2007), interpretivism differentiates between the members of the social setting and elements of natural science objects. Further, it considers the role of the members of the social setting, as well as the role of researcher's reflection, in the results of the research. This means that the natural sciences is not considered the best way to study the social world since it does not allow any subjective interpretation of the context studied (ibid).

One implication of the ontological choice of this research, i.e. constructionism, is regarding the definition of the climate in this research. The issue under question about the organizational climate is whether the climate exists as an independent characteristic of the organization, or as an entity which is constructed by organization people and is perceived by them. The present research, as was described in Section 2.2, adopts the later perspective, i.e. what the social researcher can assess is what organization members perceive as being the organization climate. This means that the climate continuously influences and is being influenced by individuals' perceptions and behaviors.

The relationship between theory, empirical data and methodology is very obvious in this thesis. Throughout the research, theory and empirical data have been continuously studied and collected, and have facilitated the understanding and relation between each other. The different choices of method applied during the research process, together with theory and empirics, have helped us to develop the existing theories about the creative climate topic and create a framework that suits our scope. This systematic use of theory and empirics is close to the abductive research approach. Dubois and Gadde (2002) state that when using an abductive approach, the original research framework is modified as new insights are gained from theory and empirics. This happened during our research when we changed the interview guide after conducting the first interview and gaining information regarding how the organization functions. In addition, holding a focus group was identified as a proper method to answer the second research question after the interviews were conducted and relevant theory was gathered to answer the first research question.

3.2 Data collection

For the purpose of this thesis and considering ontological and epistemological choices, literature review and interviews, including a focus group, were considered the most appropriate data collection methods. The interviewees and focus group participants were all Ekan consultants. The methodology approach is depicted in Figure 2.

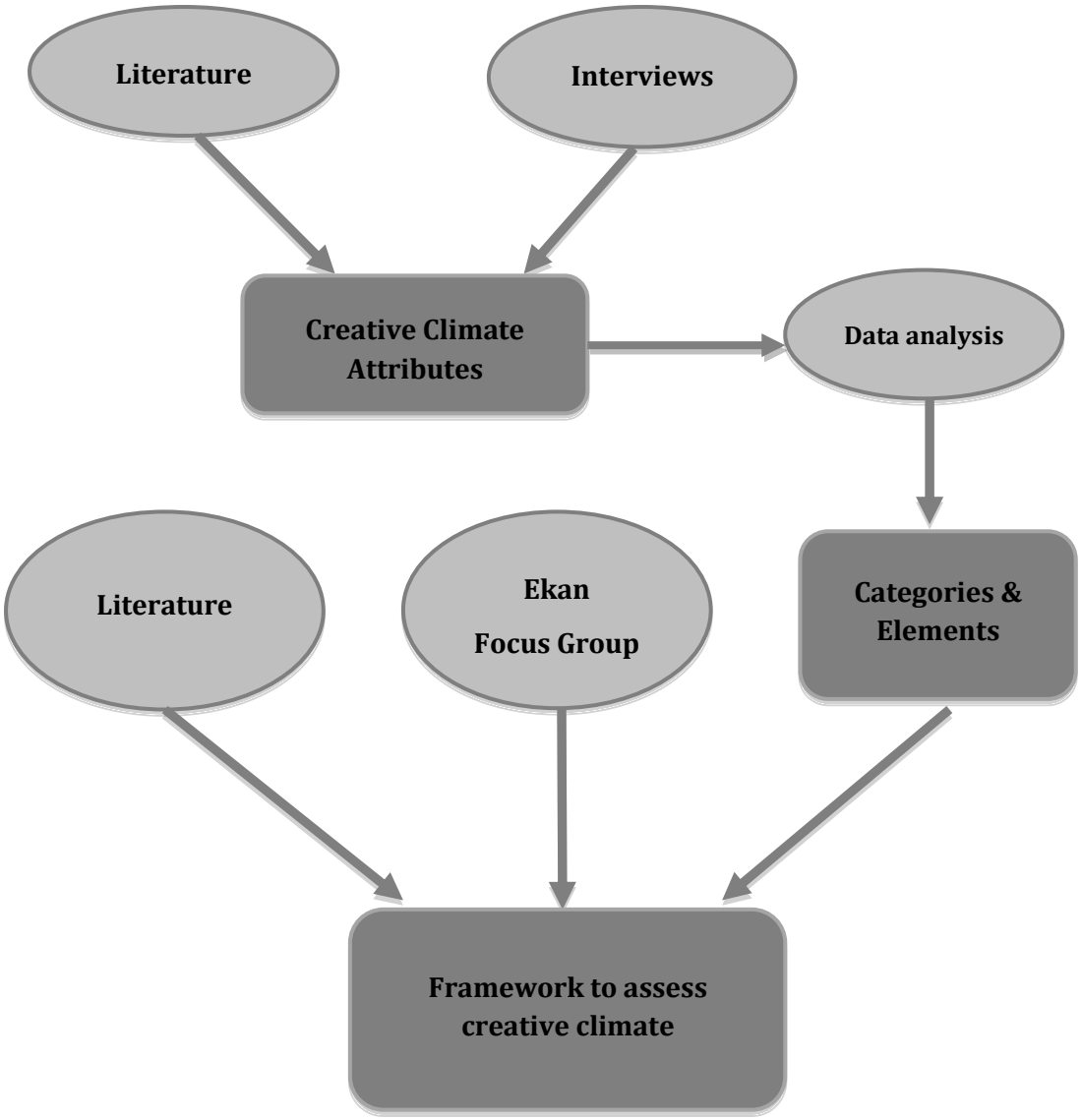


Figure 2 The research process

As can be seen in Figure 2, the data gathering process started with a literature review. Initially we conducted a broad scan of the literature related to creativity in order to find a proper angle to investigate deeper. When having narrowed down to the topic of creative climate in organizations, we searched for a company to gather empirical data from.

Together with Ekan we decided to do the pre-work to create a framework that they, and potentially others, can use when trying to assess a creative climate within an organization. After that, another phase of literature review regarding the more focused aspect of creativity took place, in order to find creative attributes that other researchers have identified. We filtered the gathered data so that the result would be in line with our definition of organizational creativity and a creative climate.

In order to get additional input, interviews were conducted to find out what consultants at Ekan think regarding creative climate attributes. Since the consultants at Ekan are the ones that will be the first to use our framework, and also as they are experienced in

organization improvements, we needed to know about their idea regarding the subject as well as to know how they actually work.

Regarding the second research question, i.e. how to assess a creative climate, a focus group session was identified as a suitable data collection method. The reason was that participants, according to their expertise and knowledge, could build on each others' ideas so that a group discussion could form the answer to the question.

3.2.1 Literature review

Once the field of research had been decided and research questions set, a theoretical framework was established in order to draw on already existing knowledge. The theoretical framework is mainly based on books and academic reports in the field and was accessed through databases such as ABI/INFORM Global, Scopus and Google Scholar, using the search words 'creativity', 'enhancing creativity', 'creativity training', 'creative climate' and 'assessing creativity'. The articles and books were accessed mainly between November 2010 and April 2011.

The literature review was divided into two phases. During the first phase, models and definitions regarding the first research question were collected. The main output from this phase was a list of 69 climate attributes that affect creativity, mainly in a positive way, but also some obstacles to creativity. The second review phase was aimed at answering the second research questions, and already reviewed as well as new papers were studied. The amount of literature presenting qualitative ways to assess creative climates was rather limited, and most input to this question was gained through the focus group at Ekan.

3.2.2 Interviews and the focus group

In an effort to answer the first research question, i.e. what constitutes a creative climate, interviews were conducted to find out what seven consultants at Ekan think affects creativity in the workplace climate. The aim with these interviews was to get additional input to our study that would help to develop the final framework. The interviews were also aimed at increasing the understanding and collaboration between Ekan and us in order to produce a framework that is both easy to understand and to use. The result was 61 creative climate attributes, some of them similar or identical to what had been found in literature, but many were new ideas not previously encountered.

A semi-structured interview guide was constructed with several questions meant to answer the first research question (see Appendix II for the interview guide). Semi-structured interviews are in line with the interpretivism and constructionism approaches of this research meaning that we are interested in the respondents' point of views regarding the issue in question. According to Bryman and Bell (2007) the characteristic of a semi-structured interview guide is that the questions work as starting point for discussion and only specify the general direction of the interview, but not limiting the interview to a strict path. Further, Bryman and Bell (2007) argue that a semi-structured interview is preferred over an unstructured when the researchers already

have a clear focus of the investigation and how to analyze the data and want to assure that the research questions are answered. The guide was scrutinized by the supervisor at Chalmers and corrections and clarifications were made as well as the adding of a couple of questions.

In order to optimize the interview guide even further, it was first tested on our supervisor at Ekan, Malin. After this, the guide was revised and some questions removed and added before interviewing other interviewees. At the interview with Malin, organization-related questions were also asked in order to find out necessary facts about Ekan.

Interviews were held with seven consultants, three of them managers, in an attempt to cover the whole spectrum of industries and questions that Ekan works with and that the forthcoming assessment tool is meant to cover. More information regarding the interviewees can be found in Appendix IV. The interviews were tape-recorded, which is good practice in qualitative research according to Bryman and Bell (2007) since the ability of the researchers to memorize everything that is important is limited. It is also possible to listen to the interview several times in order to make a more thorough analysis. Sometimes it might also be of interest for external researchers to evaluate the interview data (ibid). Furthermore, the tape-recording helped us to be more focused during the interview instead of taking notes uninterruptedly. Both of us attended all interviews, except for one, but this was solved by the possibility to listen to the recording of that interview.

Because of the semi-structured format, we did not provide the respondents with the exact questions before the interview, just a description of the topic. This was because interviews sometimes might take a new angle and some questions would therefore be irrelevant. The downside was that the respondents did not have the opportunity to prepare specific answers, and even though the respondents had relevant experience, it might not have shown during the interview. Therefore, the respondents were encouraged to contact us afterwards if they had come up with new useful information or good examples.

For the data gathering regarding the second research question, a two-hour focus group was held with three consultants; Malin, Dag and Peter, and us as moderators. A focus group is a group interview that does not have rigid structure (Bryman and Bell, 2007). This means that, according to Bryman and Bell (2007), the whole group, both moderators and the participants, take part in the advancement of the discussion and the result will be a joint production of the team. In this type of data gathering, the group interaction is of importance to gain the final output (ibid). Regarding the second research question, the concern was to design a tool that would guide the management consultants in how to assess the climate. As a result, the consultants' ideas about the best way for them to assess a climate within client organizations were necessary. Their experiences and expertise were used as input when constructing the framework. During the focus group

the possibility of assessing climate through a workshop structure was discussed. However, other possibilities emerged during the session that led up to the final conclusion to develop a checklist instead, without prescribing any specific data gathering method to it. The focus group guide can be found in Appendix III.

3.3 Data analysis

A main part of the data analysis has been the structuring of the creative climate attributes. The schematic view of the Category-Element-Attribute Model can be seen in Figure 3 below. This part of the Chapter attempts to provide a thorough description of how data was structured to develop the model. Figure 2 above shows an overview of the data analysis position in relation to the other parts of the research process.

The data structuring was conducted not only to get an overview of the attributes, but it was also necessary in order to better convey the attempted answer to the first research question. Because of the relatively vast amount of creativity climate attributes identified during the data collection process, grouping them seemed to be the obvious way to go. Inspired by literature (e.g. Amabile et al., 1996; Ekvall, 1996), five categories were created in which the attributes would be placed. The five categories were constructed based on our initial knowledge about the attributes and the inspiration gained from literature. The definitions of each category were made as broad as possible without becoming ambiguous or trespassing another category's definition border. The purpose of making them broad was to capture all climate attributes within them and to keep the number of categories low. Each attribute were treated and discussed by us and then placed in the proper category. 24 attributes did not fit any category and were left aside for the moment. The process resulted in some redefinition of categories and a session inspired by the KJ method with the 24 outliers.

3.3.1 The KJ method

The KJ method, by Jiro Kawakita, is a structured process of organizing facts around a problem where many different options exist (IdeaConnection, 2010). It includes a discussion element where everyone can participate and combine individual facts and experiences. The process aims to an agreement and structure of peoples' opinions about the problem (ibid).

The 24 outliers were written down on small pieces of paper, one piece for each attribute. After discussion and agreement regarding the meaning of all attributes, similar attributes were grouped together. Each of us did that individually and under silence. During this session, both of us were quite in agreement except for one attribute, which was left undecided. At the end of this phase, silence was broken and discussions about the different groupings took place and we reached agreement about the undecided attribute as well. During the discussion, a few rearrangements were made but most of the groupings were left unaltered.

Each group of attributes consisted of three to seven attributes; the attribute that summarized the group in the best way were selected as the representative of the group

and placed on top and the others below. The next step was to see if any of the groupings could be placed under the already existing categories. The result of the discussions that followed was that two of the categories were renamed and their definition slightly changed. Three new categories were created based on the groupings that could not be placed under any already existing category. The creative climate attributes that had already been placed under a heading and were not part of the KJ session were as a result also affected by the new categories and definitions. This had the implication that a second round of placing these under categories had to be conducted. When that round was finished, a ninth category had been created after splitting an existing category into two, and all attributes now belonged to one category. We later decided however that one of the other categories should be infused in the other category because of the close relationship between them.

The intention to have broad definitions of the categories led to a quite wide spectrum of climate attributes within most of the categories. To enhance the overview possibilities even further and to make the categories more clear, sub-categories, called *elements*, were created. These elements grouped similar attributes within each category together under a common name. Elements concern different aspects of a climate category. Attributes within an element share similar characteristics but differ somewhat from the ones in the other elements in the category. This grouping of attributes into elements is another piece of this Category-Element-Attribute model that frames the organization climate in three layers, each representing the climate in a certain level of detail. The fundamental construction of the model is illustrated in Figure 3. Each element consists of two to eleven attributes (see The Category-Element-Attribute Model in Chapter 6).

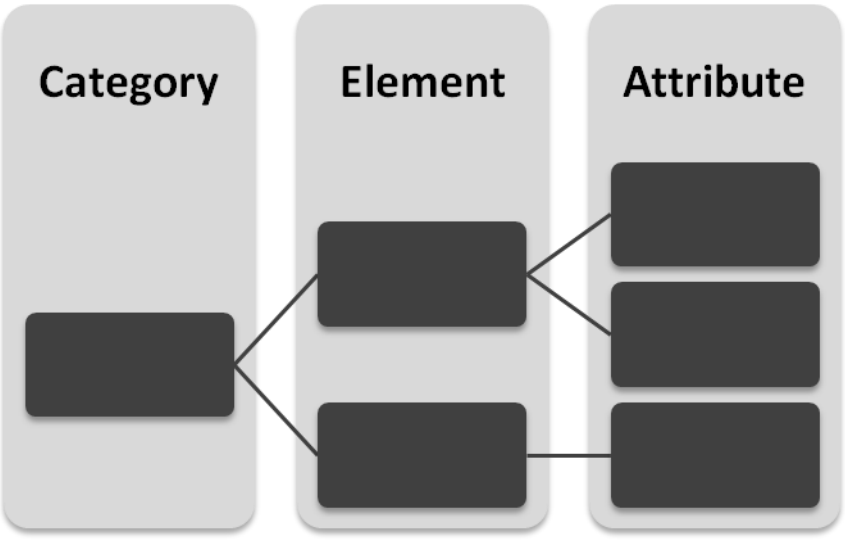


Figure 3 The underlying structure of the three-layer model. The attributes have been grouped into elements, which then constitute the building blocks of the categories.

3.4 Trustworthiness

According to Horsburgh (2003) subjectivity is an inevitable characteristic of the qualitative research strategy where the researcher is part of the research process and the results entail the researcher's perceptions. This research is subject to, in the first place, interviewees' interpretation of organizational creative climate, and then, our perception of their statements. Further data categorization and model development were also subject to our understanding of the attributes and discussions. However, this subjectivity was an accepted and acknowledged part of the research. As Daly (1997) mentions, all what the social researcher constructs is based on interpreted facts. Yet, as Horsburgh (2003) states, reflexivity is an active acknowledgement by the researcher regarding the inevitable influence he or she has on the research. The researcher precisely illustrates the process through which the theory is generated, and then it is upon the reader to determine the trustworthiness and plausibility of the research (ibid). Additionally, by providing as much information as possible regarding the context in which the research is conducted, the researcher enables the reader to decide whether the findings are transferable to other contexts or not (Thomas, 2006). As a result, the research process has been thoroughly described in previous section in order to increase the insights into it and to facilitate any attempts to do a similar study. Moreover, below we provide reflections on the role of ourselves during the course of this research.

During the interviews, interviewees were asked about what they think *creativity* is. The aim of this question was to identify the interviewees' conceptualizations of the subject in question. This helped us while analyzing and interpreting the interviews to extract the attributes. Before the focus group session, the participants were provided with the organizational climate model that was developed and the meaning of each category was discussed with the aim of making them acquainted with the model and aligning the interpretations of the whole group.

Regarding the subjectivity in gathered data; after each interview, we together reviewed the content of the interview to discuss about our interpretations. Moreover, participants of the interviews as well as focus group session reviewed the results of the empirical studies in order to confirm our perceptions of their ideas.

Each attribute used in the model is obtained from literature or empirical studies and this means that there is a solid base regarding their contribution to a creative climate. Yet, great parts of the categorization have been carried out based on subjective analytical conclusions rather than explicit signs from literature or empirics. However, as was mentioned earlier, subjectivity is inherent in the adopted research strategy. Also, what authenticates the categorization is the great deal of time and effort dedicated to discussions about how to categorize the attributes, and the session inspired by the KJ method which was of great help in this respect. Moreover, the model is inspired by

Ekvall's (1996) and Amabile's (1996) categorizations, which have been developed and later, tested in various researches.

The feedback from the focus group participants regarding the understandability and rationality of the model was positive. This confirms that regardless of whether the grouping is theoretically approved or not, it can still be usable in the proper context. It also supports our interpretation of what the interviewees expressed during the interviews. According to the scope of this research, the functional model ought to be a practical categorization to fulfill the assessment purpose for management consultancy firms and similar.

4 Empirical findings

This chapter presents the data gathered from Ekan through interviews and a focus group session. The structure is similar to the one in Section 2.3 in order to facilitate comparison and to later present an analysis that connects theory and empirical findings in an understandable way.

4.1 Interviews: The creative climate attributes

This Section of the Chapter accounts for what has been extracted from the seven interviews at Ekan. It includes what the interviewees believe constitutes a creative climate. The reader will also see that some of the stated attributes are similar or identical to the ones mentioned in Section 2.3; while others are the interviewees' own suggestions and have not been found in the literature. The attributes presented in this Section are interpretations of what the interviewees expressed. Our interpretations were however later confirmed by the interviewees.

4.1.1 Work Characteristics

When asked about what fosters creativity in Ekan, Peter said that the job should be challenging. Malin highlighted the importance of matching people with assignments by saying that "if [a person] does not have the right job […] it is very difficult to be creative". She also added: "You need to enjoy your profession." Peter described how freedom in his work allows him to be creative, but at the same time he warned that too much freedom might lead to laziness. The idea that freedom is a creative climate attribute was also expressed by Petra and Catharina. Malin said that "there should be a lot of freedom […] combined with responsibility". In relation to the freedom attribute, Peter described how a goal-oriented approach helps to focus the efforts, which would have been harder without goals. The ultimate goal at Ekan is customer satisfaction, and this is what all employees strive for, but with a great deal of freedom designing the way to it. Catharina also talked about how goal-orientation helps to narrow down the scope and efforts in order to deliver what is asked for.

Catharina, Malin and Peter emphasized the balance between freedom and control. Catharina and Malin implied that freedom is influential when you want to generate ideas, but then a certain amount of control is needed in order to narrow down the scope of creative ideas to fit the objectives. Peter said that "limits and a framework are necessary, in the same way that problem solving and obstacles can fuel creativity". However, as Dag said, strict control does not lead to creativity.

Peter described how he believes that there needs to be a balance between shared and individual responsibility. For every task, someone should be in charge, but the responsibility for the total outcome should be shared among all participants. Evelina talked about the importance of role clarity, i.e. how clear a person's task and role are and how they relate to others. Evelina further argued that there must also exist clear and shared goals and an anchored mission that make people direct their efforts in the same direction. Mia said that "you have to have the company goals in front of you to be creative

in the right way". Petra mentioned participation as a creative climate attribute and said that involving employees in goal setting and strategy planning enhances creativity. Malin shared this opinion and said that when employees participate in strategy planning, they start to think and therefore become more creative. She noticed however that not everyone wants to participate, but if not given the chance, even the ones who would like to, do not have the opportunity to be creative. Also, according to Malin, if the employees know the organization's mission they can direct their creativity to the organizational goals in their day-to-day work; "The most important thing for creativity is that you know where the company is heading".

4.1.2 Management Support

Management support is very important in order for creative ideas to become reality, and even lifted in the first place, according to Catharina. Evelina said that managers should support subordinates and show that creative ideas are valued and will be considered for implementation. Dag referred to Theory Y by Douglas McGregor (Workforce, 2002), where employees are seen as self-motivated and enjoy their work. When Theory Y is adopted in a work place, managers mainly guide their subordinates by setting a scope, but otherwise let them exercise a great deal of freedom in their duties, Dag concluded. When managers do not show support, the relationship between them and the subordinates suffers and fewer creative discussions take place, Malin said. Managers must also provide sufficient feedback, she continued, especially during the first years of employment. Petra also gave her idea about feedback and described Ekan's coaching system as a proper mechanism in which employees are provided with feedback and guided in their work and personal development. She believed that this has a great potential to influence the creative performance of employees. Petra also mentioned how managers sometimes suppress creativity by not letting subordinates try their ideas with the motivation that "it has been tried before, and it didn't work".

Dag emphasized the importance of management talking the language of their subordinates. He referred to an organization where managers had managed to translate the market competition picture to the people within the organization, which then had started a creative process and a new product to meet these external threats. Without this translation by managers, Dag said, the employees would not have realized the true nature of the competition and its effects on them. To utilize this sense of urgency from external threats to boost creativity is something Petra agreed with. The pressure needs not come from competitors however; it can be laws and regulations that require a new solution, according to Mia.

Catharina talked about the importance of making sure that employees are satisfied before they can start being creative. She referred to the Hierarchy of needs by Maslow and described how it should be used for each individual. Peter discussed the value of managers being open in their communication with subordinates. "An open climate counteracts passiveness and defensiveness, both of which restrict creativity and the desire to contribute", he said.

As stated by Malin, creativity needs to be focused, and the understanding of the strategy and goals facilitates this. Thus, managers must tell the employees in which direction the organization is heading. Peter had a similar view and said that managers must be open to their subordinates and thoroughly communicate the goals to them. Peter also pointed to the significance of sticking to set goals for a long period of time. He said that if managers continuously make and erase goals, employees get less keen on trying to come up with something creative.

Another task for managers is to determine the ratio between adaptive and generative creativity, Evelina said. She elucidated the distinction between these two types of creativity by saying that adaptive refers to incremental improvement ideas whereas generative is the one that leads to entirely break-through ideas. According to her, based on what ideas are needed to be developed and the ones responsible for that, managers have to decide on which type of creativity to ask for and encourage.

4.1.3 Co-worker Support

In a supportive climate, people should be allowed to discuss with each other and go deep into the problems, according to Evelina. She further stated that there must exist a will to listen to each other and find new solutions. Evelina mentioned the FIRO model[1] (Fundamental Interpersonal Relations Orientation), which models interpersonal relations within groups. She said that according to the FIRO model, and based on Wheelan's group development model[2], it is only during the last phases of the team development that interpersonal issues are solved and energy is directed at solving problems instead. She emphasized that this is the point where the team is actually productive and creative. Petra gave her view of a supportive climate by saying that in such a climate, people build on each other's ideas in order to come up with something creative. Mia said that for creativity to flourish there must be time to exchange information among colleagues.

4.1.4 Safety

Safety is an issue mentioned by a number of interviewees as being influential on human relations and consequently on creativity. "Safety is the key", as Catharina stated. She described that in a safe climate people are not afraid to come up with suggestions or being judged. Petra and Malin said that in order to support creativity, people have to feel that it is okay to propose ideas "[even] if [the ideas] are not the most brilliant ones" (Petra). Having a tolerant climate, respecting one another and the ideas each brings, are the characteristics of a safe organization according to Petra and Evelina. According to Petra "It is important that everyone is respected."

---

[1] More information regarding FIRO model can be found in Schutz, W.C. (1958). *FIRO: A Three Dimensional Theory of Interpersonal Behavior*. New York, NY: Holt, Rinehart, & Winston.

[2] More information regarding the Wheelan group development model can be found in Wheelan, S. A. (1994). *Group processes: A developmental perspective.* Boston: Allyn & Bacon.

As Dag emphasized, "trust in the organization is perhaps the most important item, because without trust people do not dare to say what they think; so you need trust, and openness". Trust makes people listen to each other, according to Evelina. Malin also mentioned the importance of trust in that people do not feel judged by what they say in order “to establish relations that makes it okay to say what you think". Peter declared that failure is part of the success and without trying various ways and experience failure sometimes, success will not be achieved; that is why it should be all right to fail sometimes. Yet he added that the mistakes should be expressed to prevent further recurrence. Dag shared the view but also added that "you must make mistakes, but the clue is to make them as cheap as possible".

Mia stated that it is appreciated that every member in a creative organization brings his or her experiences and point of views into the process. She added "You need to be permitted to think new thoughts". Evelina referred to free expression of ideas by saying that all employees need to have the shared perception that they have the right to bring new ideas. This was supported by Malin as well.

Dag regarded creative activities as playing, which means that during the creative process, the person experience joy, freedom and allowance. As Petra said "You have to have fun!". Evelina and Peter also mentioned having fun as a creativity stimulating attribute. Moreover, Petra and Evelina emphasized personal warm relationships as increasing motivation.

4.1.5 Resources

As was described in Section 2.3 about the climate attributes, among the resources critical to foster organizational creativity, time plays a great role. This was also highlighted by the interviewees. “Creativity […] is created [in] interaction with colleagues”, Malin said, and they must therefore be given "time to sit down and think of how [they] can do [things] better".

This forms a climate in which individuals think about the improvement of the whole setting during group discussions, and not only their own work. Evelina stated that in order to solve problems creatively, time should be spent on discussing them deeply in the group. Additionally Malin and Petra mentioned that an obstacle is insufficient time to reflect upon prior performance. According to Mia’s experience, development groups are more creative than the rest of the organization and that is because, among other reasons, they are allotted enough time to spend on their focused task. Evelina also added that in organizations, people have to feel allowed to spend time on creativity.

"The creative process takes time" Mia expresses, where new ways should be examined in the group, instead of repeating old solutions. But she also pinpointed the role of spending time individually during a group idea generation procedure. Related to this, Catharina mentioned that for a more innovative organization, employees have to be allowed to put some of their time on the works or projects they are interested in.

Mia looked at the time issue from another perspective. She mentioned that because of limited resources and budget, there is always a time limit and this can even work as a driver to creativity; keeping the balance is of great importance here.

4.1.6 Diversity

Peter described the Medici effect[3] and how the combination of different knowledge, perspectives and cultures of the people coming together in Florence made creativity flourish during the Renaissance. Many organizations that are successful and creative have managed to create similar conditions within their organizations as in Florence, Peter said. Women should also be involved more in leadership since this will increase diversity, and creativity, according to Peter. Catharina had a similar idea and said that the development of new ideas needs different perspectives from colleagues. Evelina supported the idea of the positive association between diversity and creativity by saying that diverse opinions initiate debates where new ideas might be generated. Evelina also expressed the usefulness in listening to others and their ideas in order to find a new solution. Petra elaborated on the benefits of considering alternative solutions and said that creativity is not always sought for; organizations many times try to solve things the same way as has been done before, without considering new better solutions. Peter also pointed out the negative effect on creativity by continuously using the same solutions. He described the value of breaking the chain of association in order to avert from old thinking habits and find something new and useful.

4.1.7 Dynamism/Risk-taking

Evelina elucidated that sense of urgency and challenge creates an environment in which new ways are found and accepted easier. By sense of urgency she meant when people know that there is a real problem to be solved, for example a client's problem or a situation, or even a group problem. Petra also agreed that external threats and emergencies boost creativity. Another quality of climate, Evelina stated, is that people perceive that creativity is asked for within the organization. A creativity-seeking climate encourages members to generate new ideas to a greater extent. However, as Malin said, "You can't force creativity to happen", since this will create stress if employees do not feel that they are being creative.

One of the characteristics of a dynamic climate is the norm of questioning. Peter mentioned that people are not born creative, yet some people are better in seeing and questioning established ways. According to him, doubting and questioning the established knowledge lead to creativity. Dag also mentioned "you need to have a climate where you also have the ability to question things". In defining creativity, Petra elucidated that to be creative is to stop and think why things are done the way they are, which means challenging the status quo.

[3] More information about what the Medici effect is can be found here: www.themedicieffect.com/downloads/MediciEffect.pdf

As stated by Dag, the main obstacles to creativity are conventional routines and processes in organizations, but not individuals. Yet individuals change and conform to the routines as they enter the organization and go through the process of adapting to performance norms. As a result people lose their creative abilities, Dag declared. In general he believed that following the routines instead of seeing things differently causes mistakes and less creative solutions. Mia, who had a similar idea, responded that routine work does not help people to become creative. Peter described the influence of routines on big and small companies. According to him, routine processes are so dominant in large companies that the creative ability reduces substantially, whereas in small organizations people conform less to regulations and are more creative. Nevertheless Peter mentioned a new aspect regarding routines and that was a balance between standardizing the solutions and searching for new ones. He believed that although seeking for better solutions should be how tasks are done in an organization, it is not feasible to improve the solutions unlimitedly. Therefore, once reaching the best practice, it can become the standard for people to follow for a while, but with time a new best practice may come along that should be implemented instead.

Peter declared that creativity increases in cases of higher level of risk-taking. He described that success does not occur without a number of failures, and as a result, taking risks is necessary in order to improve. Dag also described the difference between making changes in production industry and management models. According to him, since changes in management models are often not as costly and time-consuming as changes in production settings, taking risks of change and improvement is more feasible in this context. He added that despite this fact, the culture of resistance hinders organizations to implement such management changes and this in turn hinders creative development.

Petra added to the abovementioned point by saying that creative ideas sometimes lead to changes in the organization, and change associates with resistance. So resistance is a common obstacle according to her. Especially on the personal level, when the change enters the comfort zone of individuals, resistance aborts the creativity. On the organization level, Catharina mentioned that in non-creative organizations the dominant culture considers change and new ideas as threats, and therefore change is unwelcome.

As was mentioned in Chapter 2, since being creative and experimenting with new ways are associated with uncertainties, encouraging organization people to be creative is promoting a risk-taking approach. However, Mia emphasized that having a value or purpose of *being creative* can drive people to exercise creative behavior. As Dag stated: “Creativity must be the main objective in all businesses”. He believed that creativity should work as a value within the organization to suggest that every problem is unique and needs creative approaches to be solved.

4.1.8 Organizational Systems and Processes

Organizational Systems and Processes are introduced and summarized by the words of Mia who said that there should exist a systematic process for practicing creativity in

organizations; "You have to practice it (creativity) [...]; many people do not use their capabilities". Mia also provided a more practical example of how a municipal dental care unit had implemented continuous improvements as a structured process to make creativity a daily habit. She also said that by looking at other creative organizations it is possible to learn and implement creativity methods in-house in order to increase the internal creativity. Petra described how there often exist a lot of ideas that rarely get implemented because there is no method to take them any further. Malin shared this opinion and said "you must make room for creativity [...]; there has to be processes and methods [...] that enables creativity to happen". Petra also mentioned how lack of structure in meetings tends to make them less constructive. She further stressed that creative actions must be followed-up, otherwise the initiative might stagnate.

Malin expressed how managers often say that they want more creativity, but without establishing systems for how to accomplish it in the management model, these words often remain just words. However, using systems and processes does not mean that the work is done based on routines and that people conform to standards, according to Dag, which would be creativity destructive. Instead, he continued, a systematic process will often help to direct your creativity and he elucidated the process Ekan uses when they are going to present a proposal for a client.

Since creativity is about coming up with something new and useful, it is crucial that creativity is aimed at the right thing. Peter described a project he had been in many years ago in which he had experienced high creativity. To describe this, he said that the project had had a very clear framework, within which they had stayed and were able to focus their creative thoughts. “Thus a part of creativity is to be clear on what is to be targeted by the creative process in different situations, and what is not. To manage creativity is to manage the pulsation between phases of openness, where the framework is questioned, and phases of focus, where details are perfected”, Peter concluded.

Catharina described the importance of knowledge in order to be creative and that the organization should provide their employees with education possibilities, as is the case in Ekan. Catharina also pointed out the benefits of having an established teamwork process. This was also supported by Dag. Mia implied the importance of teamwork when she said that in order to be creative, discussion time must be spent together with others. Evelina said that when people work together, they become more creative.

Peter highlighted the value of volunteerism in contrast to assigning tasks to people. According to him, if you can choose what you want to do, you will as a result become more creative. He further discussed how an extrinsic reward like money affects creativity and reached the conclusion that not only does it not enhance creativity, but it might actually impede it. Dag shared the opinion that monetary rewards do not work as creativity stimuli; instead "people want to be seen". According to Catharina, recognition is the absolute best way to motivate people to become more creative; “people get used to money”, she said. Mia stated that motivation to be creative comes from within, and in

order to reach this intrinsic motivation, leaders and others in the organization must show appreciation and let people know their importance to the organization; “You see people and make them know that their work is important” Mia stated.

Catharina mentioned how hierarchical organizations often hinder creativity since there is a higher degree of unhealthy competition. She said that in such an organization, creative behavior is not so appreciated because it is seen as a threat towards other people who wishes to climb the organizational ladder. According to Catharina, people might even steal others’ ideas, which create reluctance in idea sharing and discussion. In flat organizations however, like Ekan, ideas are highly appreciated, which leads to a more creative behavior, Catharina concluded. Malin had a similar view and said that in a creative organization, hierarchies must be set aside and people should work together; not as chief and employee.

Lastly, Catharina talked about the value of cross-functional work as an organizational work procedure, for creativity. She said that when people from different fields and departments come together and share their thoughts and knowledge, new ideas might be generated.

4.2 Focus group at Ekan: Assessing a creative climate

The purpose of having a focus group was to get input from the consultants at Ekan to develop a tool that could be used when assessing the creative climate in organizations. The assessment tool, the Checklist, will be presented in the Chapter 6. The participants were Dag, Malin and Peter, and it is their combined answers that are presented below.

According to the consensus, the assessment should be regarded as a pre-study where the most relevant creative categories for the organization in question are determined. Not all attributes might be of great importance for an organization and it might even be unfeasible to try to tackle many categories. A pre-study is a part of the initial steps in the consultancy process according to the focus group participants (see Figure 4 for the consultancy process). Suggested data collection methods for the assessment discussed by the participants included interviews, questionnaires, focus groups, document reviews and observations. This information facilitated our understanding of how the framework could be constructed. Problem analysis and fact finding, parts of the diagnosis step in the consultancy process, should be fulfilled by the framework.

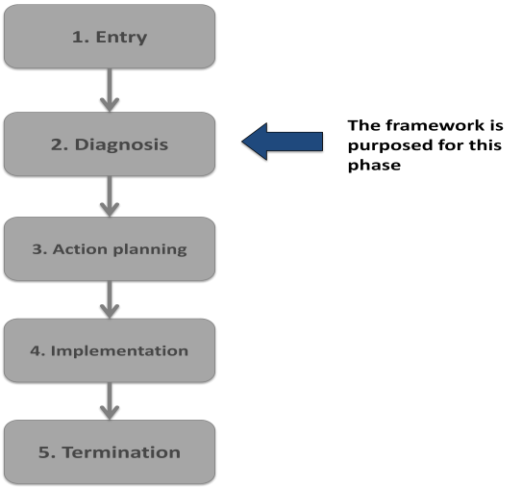


Figure 4 Phases of the consulting process, from Kubr (2002)

Regarding the use of attributes in the assessment process, the participants agreed that people in client organizations need not see the creative climate framework and its attributes. It should instead be used by Ekan as a template and guide when doing the diagnosis. The clients might not even be aware that in some cases it is lack of creativity that is the underlying reason for a problem. This is because a problem often manifests itself in more visible ways, like low productivity. Or, client organizations might very well be creative, but this does not show since they do not manage to get products out on the market for example.

When discussing about data collection methods and the constellations of e.g. focus groups, the participants said that the groups should not consist of people from different units[4] since creativity has different meanings depending on the context. It was also agreed during the focus group session that managers and subordinates should not be interviewed simultaneously. When interviews are carried out in groups, such as a focus group, answers should not be provided by the group but rather by individuals. This is because it is the individual opinion that matters; not group consensus. During interviews, the interviewees should also be asked to define what they believe creativity is in order to better interpret the answers. It is also crucial to use the organization's own language as much as possible when designing questions.

When the pre-study is done, it should be investigated whether the people within the client organization agree with the painted picture of the current situation. The next step is then to decide what should be improved and achieved. The participants suggested that a cause-and-effect map can be drawn in order to get to the root cause of a problem. The idea of a gap analysis came up, i.e. to compare the organization's current position with regard to a specific category, with the perceived importance of that category. The possibility to link creativity categories to each other was also discussed since the participants felt that some categories might affect others.

[4] A unit is a group or function within an organization with a specific task, e.g. a production team, marketing or R&D.

Another issue lifted forth during the focus group session was the size of the creative climate investigation, since it will affect the depth and quality of the results. However, an investigation like this one is constrained by time and resource limits, and the depth of the study must therefore be adapted to each situation. The size of the client organization is also affecting the scope to a large extent.

5 Analysis

In the Analysis chapter, theory and empirics are combined in order to answer the two research questions, i.e., what attributes constitute a creative climate and how it can be assessed. Hence, the chapter contains two main sections, each dedicated to the analysis of one research question. The creative climate is presented in eight different categories, which are the same as the headings that have been used in both Section 2.3 and 4.1, and constitutes the answer to research question one. The answer is presented in the format of a model containing eight tables, one for each category. This model laid the foundation for the assessment of a creative climate and has, as is presented in the second part of the analysis, resulted in a checklist and suitable data gathering methods. The process can be seen in Figure 5.

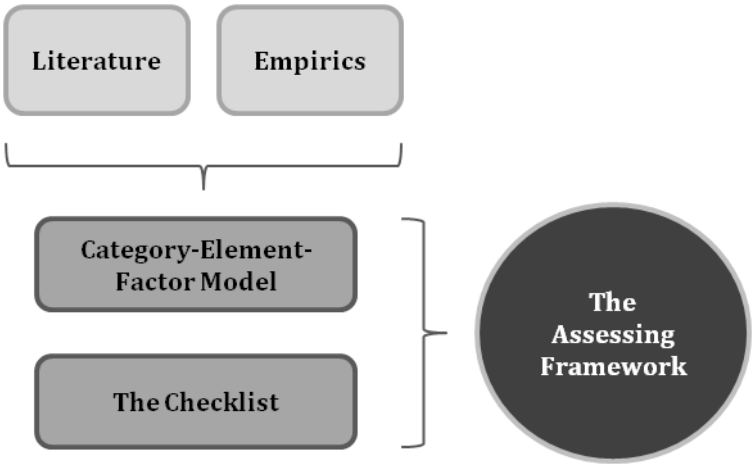


Figure 5 The analysis process.

5.1 Categorization: The creative climate

This part of the analysis concerns research question one and presents the eight categories that comprise a creative climate based on literature and empirical data. Each section starts with an introduction of the category based on the gathered data. As the reader will see, literature and empirics for the most part complement and support each other. For each category the relation between literature and empirical climate attributes is highlighted, including a discussion on what differentiates some of the empirical attributes from the ones found in literature. We also attempt to describe why corresponding attributes in the literature could not be found for all the empirical ones. There is also a relatively large difference in how many interviewees and authors that support each of the attributes and the impact of this is also lifted forth. The aim of the analysis is to present a new categorization of a creative climate.

The complete Category-Element-Attribute Model will not be presented in its whole until the Conclusions Chapter. The first part of Chapter 5, however, presents tables similar to the ones included in the final model. These tables, unlike the ones in the model, contain

the authors and interviewees behind the attributes. Finally, attributes that are preceded by an asterisk are obstacles to creativity.

5.1.1 Work Characteristics

Climate related attributes that directly have to do with how employees perform their work and how it is designed have been encountered on several occasions, both in literature and interviews. These attributes have been grouped together into a category we call Work Characteristics. Moreover we were able to identify four sub-categories, i.e. elements, which these attributes could be divided into. These elements provide an excellent summary of the category by illuminating that a work should be challenging; allow freedom; contain responsibilities; and be directed by goals. The category, containing attributes and elements with their respective advocates, is shown in Table 3.

Work Characteristics			
		Authors	Interviewees
Challenge	**Challenge**	Amabile, 1998 Ekvall, 1996	Peter
	Job complexity	Cummings & Oldham, 1997	
	Enriched jobs	Farr, 1990	
Freedom	**Freedom**	Amabile, 1998 Ekvall, 1996 Cummings, 1965	Petra Peter Catharina Malin
	***Control**	Sternberg et al, 1997 Rasulzada, 2007	Malin Dag Catharina Peter
	Freedom to experiment	Feurer, 1996	
Responsibility	***Shared and individual responsibility***		Peter
	Clarity of roles in the organization and in relation to others		Evelina
Goals	**Participation, involved in goal setting and strategy planning**	Gray, 2007 Anderson et al., 1992	Malin Petra
	Shared vision, mission and goals	Anderson et al., 1992	Malin Evelina
	Goal clarity	Anderson et al., 1992	Mia Evelina
	Goal oriented		Catharina Peter
	Sense of mutual purpose	Amabile, 1998	

Table 3 A table over the Work Characteristics Category including elements in shaded areas to the left, and attributes written in bold to right of the elements, as well as the advocates of each attribute in the two rightmost columns.

Two of the elements, namely Challenge and Freedom, carry the same names as two of Amabile's (1998) scales of a creative climate. Even though the meanings are very similar

they are not identical since our elements are shaped from several other authors' and interviewees' opinions who describe challenge and freedom at work somewhat differently. Regarding the attributes in the Challenge element, both Amabile (1998) and Ekvall (1996) refer to *challenge* as a creative climate attribute, but in quite different ways. Amabile (1998) writes about assigning tasks to people that challenge their expertise and creative-thinking skills. Ekvall (1996) refer to challenge as a measure of the involvement of the employees in the daily operations and goals. We do not use Ekvall's (1996) definition of a challenging climate in our categorization. The interviewee Peter defined challenge in a similar way as Amabile (1998). Cummings and Oldham's (1997) *job complexity* attribute is also placed under this element, at least the part of it saying that a complex job requires a variety of skills from the workers. Finally, Farr (1990) presents the term *enriched jobs*, which partly means that such jobs require more thinking. To summarize, *the Challenge element is about matching people with jobs that require them to utilize many of their skills and stretch their minds*.

The other element with identical name as one of Amabile's (1998) scales is Freedom. The influence of freedom on creativity was mentioned by a majority of the interviewees and also by several authors. The definitions differ only marginally and they all have in common that freedom means having influence over the way the work is carried out. Freedom in how to perform tasks is also a part of Cummings and Oldham's (1997) *job complexity*. Another attribute, mentioned by Feurer et al., (1996), is *freedom to experiment*. We argue that this attribute do not deviate from the definitions of the freedom attribute but is merely a more narrow view. However, as described in Section 2.3.1, *enriched jobs* attribute by Farr (1990) also includes a definition that workers should be allowed to experiment with new ideas, which is similar to the view held by Feurer et al., (1996). The element also includes an obstacle that was mentioned by both authors and interviewees. Both parties speak of *control* as being opposite to freedom. However, as argued by the interviewee Peter, complete freedom is not ultimate since it might create laziness. Consequently there should exist a healthy balance between freedom and control. Hence, *Freedom means to exercise autonomy in the daily work without feeling overly controlled.*

The third element of this category is Responsibility. Apart from the other elements, Responsibility is not something that we have encountered in literature. It could however be argued that Amabile (1998), for example, indirectly imply that responsibility is part of a creative climate when discussing about freedom; but that is not explicitly stated. Moreover, the attributes in the element are quite specific which might be another reason why nothing similar has been found in literature where more general attributes seem to be prevalent. The specific nature is also a likely reason for why there is only one interviewee behind each attribute. Peter highlighted the importance of having someone in charge for each task but that everyone involved is responsible for the total outcome. Evelina said that role clarity must exist so that people know their part of the whole. We argue that in order to be responsible for a part of the work, it is crucial that people know what is expected of them, and that is where role clarity and responsibility meet each

other. Hence, *both individual and shared responsibility must exist as well as an understandable role description.*

The influence of goals on creativity was mentioned by most interviewees and a number of authors. The importance of goals is clearly connected to freedom in that goals are said to guide the employees and focus their efforts in the same direction. Without this alignment it could be difficult to exercise freedom. Four of the attributes are closely related and touch upon different aspects of the importance of goals, but also vision and mission. Being *goal oriented* means having goals to work towards, according to Peter and Catharina. In order for this to happen, the vision, mission and goals must be shared with employees, as stated by Anderson et al. (1992), Evelina and Malin. Sharing the mission and goals is however useless if they are not clear, hence the *clarity of goals and plans* attribute. All these instances ultimately lead up to the attribute *sense of mutual purpose* mentioned by Amabile (1998). Finally, *participation in strategy and goal-setting* by the employees is the last attribute of the Goal element. The Goal element is therefore about *involving employees in goal-setting and strategy planning and to share the final vision, mission and goals in a clear way with the workforce, which they together will strive for.*

5.1.2 Management Support

The influence of management support on creativity cannot be overlooked, as has been evident in both Chapter 2 and 4. As a result of our study, four elements under the Management Support category have been developed in order to capture the essence of it. Thus, managers can influence the creative output by directly supporting the employees; by supporting new ideas; by goal-setting; and through a number of different management practices. We emphasize once more that even though some of the attributes in this category are similar to attributes in other categories, the ones presented below have a management perspective. In the Work Characteristics category for example, one of the elements was also named Goals and included attributes relating to how goals help workers to be creative in their jobs. In the Management Support category, the emphasis is placed on managers *providing* goals, which is a prerequisite for the goals to be a part of the work.

As was presented in Section 2.3.2, Amabile (1998) has a similar category in her model over creative climate scales, namely *supervisory encouragement*. In this category she has infused a number of descriptions of an encouraging supervisor. Our category is somewhat different since we attempt to go deeper into the area and present other authors' and interviewees' opinions as well. Amabile's (1998) ideas are however still a part of this category in the sense that her category has been broken down and the parts infused in other attributes. The Management Support category is presented in Table 4.

Management Support			
		Authors	Interviewees
Employee support	**Supportive and non-controlling supervision**	Cummings and Oldham, 1997 Williams, 2001 Anderson et al., 1992 Amabile, 1998 Gray, 2007	Malin Dag Catharina Evelina
	Positive, noncontrolling feedback behavior	Egan, 2005 Roffe, 1999	Malin Petra
	Positive role modeling	Egan, 2005 Amabile, 1998	Evelina Mia
	Share strategy/goals with employees		Peter Malin
	Believe in the capability of employees in being creative	Cummings, 1965	
	Perceptive in seeing things from the employees' point of view	Roffe, 1999	
	Talk the language of your employees		Dag
	Keep your employees satisfied		Catharina
	Open communication with employees		Peter
Involvement & idea support	**Participative leaders**	De Jong and den Hartog, 2010	
	***Top-management isolation**	Roffe, 1999	
	****Management suppress ideas***		Petra
Goals	**Goal setting associated with creativity**	Egan, 2005 Shalley, 2008	
	Provide clear objectives	Roffe, 1999	
	***Short-time horizons**	Roffe, 1999	
Management practices	***To use the environment threat inorder to create a sense of urgency***		Dag Petra Mia
	Transformational leadership	Egan, 2005	
	****Determine adaptive and generative creativity***		Evelina
	****Frequently changing the goals***		Peter

Table 4 Table of the Management Support Category.

The attribute at the top in the first element, *supportive and non-controlling supervision*, is the broadest attribute and encapsulates many of the other attributes in the category. It is originally Cummings and Oldham's (1997) but other authors and interviewees with similar views have been placed under this attribute as well. The attribute could also be interpreted as having an obstacle interwoven in the name but since the name of the original attribute is *supportive and non-controlling supervision*, we have not divided it. The control part of it has also been discussed to some extent under the Work

Characteristics category as opposed to freedom. Non-controlling actions are also mentioned in the attribute *positive, non-controlling feedback behavior* but is then more related to the feedback process.

The rest of the attributes in the Employee support element as well as the other elements are somewhat more specific and have as a consequence fewer advocates. This shows how broad this aspect of a creative climate is. The clear borders between these more specific attributes also leave few openings for comparisons between viewpoints. The rest of this chapter will therefore be dedicated to mainly describing the elements.

The first element, Employee support, contains a wide variety of attributes and it is therefore not practical to provide a unifying definition of it. The majority of the attributes are quite specific however, and the reader is advised to turn to Sections 2.3.2 and 4.1.2 for clarifications when needed.

The Idea support element is narrower and includes only one attribute and two obstacles. *Participative leaders* attribute is placed under this element since it is likely that employees, who are invited by managers in decision-making, are keener on generating ideas since they will experience a higher degree of ownership. By being part of the decision-making process, employees are also able to speak for their ideas and convince managers to support them. For this to work, managers must not isolate themselves or suppress the ideas put forth by their subordinates, as the two obstacles in this element imply. The Idea support element is therefore about *being visible as a manager and to allow employees to be part of decision-making processes and not suppress their ideas.*

The Goals element is related to how managers approach goal-setting. Thus, apart from how goals should be used and designed, described in the Work Characteristics category, *managers should set clear, long-term goals with the intention to increase creativity.*

There is no universal management practice that should be adopted in every organization. Rather, the last element provides a number of practices that are considered to increase creativity in the organization and could on many occasions serve as a guide. Therefore this element, just as the Employee support element, contains no absolute description of how to behave as a manager. The attributes should instead individually be considered and adopted to each specific case. The attributes were described in Section 2.3.2 and 4.1.2.

One final note regarding Management Support worth mentioning is that Ekvall (1996) in his CCQ did not include a management category at all. Ekvall (1996, p. 118) defends this position by saying that “The CCQ concept is a general measure of the creative climate, of the attitudes, behavior, and feelings that are common in the organization, not an indication how some individuals or groups of people behave”. We believe that this standpoint is described by the ontological consideration of CCQ that the climate is an independent entity from the individuals within the social setting.

5.1.3 Co-worker Support

It is not just support from managers that enhances creativity; our study has shown that also co-workers have a big influence on each other's work and creative output (see Table 5). One of the main reasons for why co-worker support is so influential on the creative climate, we believe, has to do with the underlying construct of an organizational climate. With our ontological perspective, constructionism, we believe that the climate is shaped by those who are part of it; and being such a fundamental part of an organization, employees and hence co-workers and their behaviors have a major impact on the climate. The category contains two elements, Co-worker attitude and Information sharing. Co-worker attitude summarizes much of what is important for co-worker support but is complemented with a more technical aspect in Information sharing.

Co-worker Support			
		Authors	**Interviewees**
Co-worker attitude	**Support between colleagues**	Dutton, 1996 Zhou and George, 2001	
	Stimulating co-workers	Cummings and Oldham, 1997	
	Discuss the problem and build on each others ideas		Evelina Petra
	Idea support	Ekvall, 1996	
	Willingness to listen to others and find new ideas		Evelina
	Energy directed to solving problems instead of interpersonal relations		Evelina
Information sharing	**Exchange of information**	Cummings, 1965 Amabile, 1998	Mia
	***Secrecy**	Cummings, 1965	

Table 5 The Co-worker Support Category.

The Co-worker attitude element includes two quite broad attributes, *support between colleagues* discussed by Dutton (1996) and Zhou and George (2001), and *stimulating co-workers* by Cummings and Oldham (1997). The other four are more detailed, especially those mentioned by Evelina, which could be explained by her expertise in social behaviors at work. They more specifically address how co-workers can support each other's creativity in practice, through discussions, by listening, and to focus on problem-solving instead of personal disputes. *Idea support* by Ekvall (1996) also has a more specific focus but regarding how new ideas are supported.

In order for co-workers to support and stimulate each other, it is necessary that they exchange information, stated by Cummings (1965), Amabile (1998) and Mia. Hence, Co-worker attitude means that *employees listen to each other, provide stimulation and support with the aim to come up with new ideas.* Information sharing means that *employees and units should exchange information with the intention to improve together, not separately.*

5.1.4 Safety

According to Ekvall (1996), George (2007) and West (1990), as well as empirical findings, emotional safety and peace of mind in the workplace build a climate in which creativity emerges and is protected. As a result, Safety is one of the creative climate categories. Here, safety is defined as the situation in which individuals not only feel safe to express their opinions, but they also feel secure in their relationships with co-workers. The two main focuses, which build the Safety elements, are Safe idea expression and Safe relations. We believe that the two elements have a reciprocal influence on each other. While safe relationships among organization members lead to them expressing their ideas freely and with no fear, an environment in which members take part in decision making with no fear and judgment, strengthens relations. The result of the categorization can be found in Table 6.

Safety			
		Authors	Interviewees
Safe idea expression	**Trust/openness**	Ekvall, 1996	Malin Dag Evelina
	Participative safety	Anderson et al., 1992 West, 1990	Malin Catharina Petra
	Okay to fail or make mistakes	Dutton, 1996	Dag Peter Malin
	Free expression of ideas and concerns	Gray, 2007 Roffe, 1999	Evelina Mia
	Freedom to question decisions	Gray, 2007	
	***Judgment**	McFadzean, 2001	Catharina
	The norm of public exposure to criticism	Cummings, 1965	
Safe relations	***Respect and tolerant climate***		Petra Evelina Mia
	Playfulness and fun/humour	Ekvall, 1996	Petra Peter Evelina Dag
	Personal relationships, friendliness and warmth	Jones and James	Evelina Petra
	***Infighting, politicing and gossip**	Amabile, 1998	
	***Conflicts**	Ekvall, 1996	
	***Purposive threats**	Gray, 2007	

Table 6 The Safety Category.

As can be deduced from the table, the attributes of this category have many advocates among authors as well as interviewees, as the majority of the attributes have three or more supporters. This shows the importance of this subject. Also the interviewees look at the topic on the same level of detail and precision as authors. This is opposite to some other categories in which more general attributes are advocated by authors while detailed and practical attributes are mentioned by interviewees.

As Ekvall's (1996) broad *trust/openness* dimension was described in Section 2.3.4, it not only refers to Safe idea expression element, but also touches upon Safe relations among people. It is however placed in the Safe idea expression element since it is most related to that. In fact, some of the other attributes of the first element are included in Ekvall's (1996) *trust/openness*. Examples are; *okay to fail, free expression of ideas* and *judgment*, which are expressed by various other authors and interviewees.

There are two attributes in the Safe idea expression element that hold the very meaning of the element, namely *free expression of ideas and concerns* and *freedom to question decisions*. Although both refer to a freedom concept, there is a difference between these attributes with Freedom element in Work Characteristics category that make us put these attributes here. These freedom attributes refer to the perception of employees within the organization that they are allowed to express themselves, whether they have a concern regarding work environment, have a novel idea or they wish to put organization decisions under question. Whereas, the Freedom element in the Work Characteristics category characterizes a work in which the employee have enough authority in performing his or her job.

Cummings (1965) elucidates another attribute that is a sign of safe idea expression in a climate. It is observed in creative organizations where people accept to be criticized publicly, and that the ones who criticize do that in a constructive manner and for the sake of organizational improvement. Although Cummings (1965) is the only reference for *norm of public exposure to criticism*, this norm stems from a tolerance climate that members respect each other, which is mentioned by three interviewees as a safety attribute. Hence, *safe idea expression element is about openness and the feeling of safety that makes people express their ideas, even if there is the possibility of failure, making mistakes or being judged.*

Despite the Safe idea expression element that specifically spotlights how ideas are treated in a safe climate, the element Safe relations refers to how people treat each other in a safe environment. Ekvall (1996) considers *fun/humor* as one of his ten creative climate dimensions, which indicates the significance of having fun in the workplace. This was also confirmed by four interviewees. We think this aspect, together with other attributes such as *friendliness and warmth* and *respect and tolerant climate* form safe relations among organization members that later lead to trust, non-judging behaviors and respecting the right of free expression. In this regard, the only obstacle dimension of Ekvall's (1996) model, *conflicts*, is also what we believe hinders safe relations. *Conflicts*

(ibid), *gossip, infighting and politicking* (Amabile, 1998), together with *purposive threats* (Gray, 2007) are opposite to trustful and respectful relations. To summarize, what reinforces and is affected by an open and safe climate, is safe relations. In such relations, *simultaneously as having fun, people feel intimate and respectful towards each other, with no backbiting and hostility*.

5.1.5 Resources

For creativity to yield desired results, resources should be allocated (Anderson et al., 1992; Williams, 2001). This includes time, financial and human resources. For instance, proper financial resource allocation is a source of support for creativity seeking activities according to Amabile (1998). Resource allocation is part of managers' responsibilities but the focus of this category is not the *allocation* of resources, but the resources themselves. Besides, the category contains the ways that the allocated time should be consumed. This category is similar to Amabile's (1998) *resources* category in that both consider money and time as main creative climate resources and that both suggest a balance in the amount of time or money allocated. See Table 7 for the category and advocates of the different attributes.

Resources			
		Authors	Interviewees
Enough time allocation	**Time**	Cummings, 1965 Amabile, 1998 Dutton, 1996 Ekvall, 1996	Malin Mia Evelina Catharina Petra
	Spend time alone	Giotra et al., 2010	Mia
	Time pressure	Ohly et al., 2006	Mia
Money	**Money**	Amabile, 1998	

Table 7 The Resources category.

The relative large number of authors and interviewees addressing the *time* attribute as a critical creative climate attribute shows the significance of this issue. As it was also described in Section 2.3.5 and 4.1.5, there are controversial ideas among scholars as well as interviewees regarding what a proper amount of time to encourage creativity is. Therefore one element is named Enough time allocation in order to convey that too much time could be as harmful as too little, as is reasoned by Amabile (1998), Ohly et al. (2006) and several interviewees. On one hand, according to Mia and Cummings (1965), insufficient time to do tasks leads to a habitual approach to work with no additional new ideas. Moreover, insufficient time to reflect back on the performance leaves the learning process incomplete, as Petra mentioned. On the other hand, time pressure is a driving force that can create a sense of urgency and encourage creativity (Amabile, 1998). It appears that the best conclusion for this controversy is the results of Ohly et al.'s (2006) research that infer a curvilinear relation between time pressure and level of creativity.

Regarding this, the optimum level of time should be allocated to gain the highest level of brain activation and creativity. This means that it is important to allocate enough time while also creating a sense of urgency through a healthy amount of time pressure.

But what should be done with the time that is allocated to creativity then? Ekvall (1996) suggests discussions around new ideas, which is also supported by the interviewee Malin. Taking time for deep group discussions also goes for solving problems according to Evelina. Mia mentioned that time should be spent on both group discussions and individual thinking. This idea is in accordance with the results of the studies by Girotra et al. (2010). Dutton (1996) mentioned that the output will be more creative in case the employees are allowed to spend a percentage of their working time on their project of interest. According to Malin and Petra, taking time to reflect back and review the performance is also needed.

A number of interviewees touched upon that financial resources are always limited which in turn affect time limits. This means that although a tight budget might leave a positive effect on creativity to a certain extent, too tight budget leads to too limited time, and as reasoned above, this damages creativity. Amabile (1998) supports this idea regarding project funds and argue that there should be a balance between a too tight and too generous fund allocation.

5.1.6 Diversity

Diversity is quite a small category in terms of number of attributes. Yet it is an important one, which is evident from the number of authors and interviewees talking about it; all attributes, excluding the one obstacle, have at least three different advocates. The category has been divided into two elements, which illuminate what kind of diversity that leads to creative behaviors. We have separated Diversity of people from Diversity of opinions (See Table 8).

Diversity			
		Authors	**Interviewees**
Diversity of people	**Diversity In perspectives and backgrounds**	Amabile, 1998 Roffe, 1999	Catharina Peter
	***Intolerance of differences**	Roffe, 1999	
Diversity of opinions	**Diversity of opinions and debate**	Cummings, 1965 Ekvall, 1996	Evelina
	Consideration of alternative solutions	Cummings, 1965	Petra Peter Evelina Dag

Table 8 The Diversity Category.

The attribute *diversity in perspectives and backgrounds* is originally stated by Amabile (1998), but the ideas by Roffe (1999), Catharina and Peter have been infused into this attribute because the essentials are very similar. Roffe (1999) also identified an obstacle regarding diversity, *intolerance of differences*. Since diversity is synonymous with difference, it was natural to put the attribute and obstacle together in the same element. If there is an intolerance of difference in an organization, diversity in perspectives and backgrounds will not have a positive effect. Furthermore, *intolerance of differences* might be seen as an opposite of the *respect and tolerant climate* attribute in the Safety category. However, the meaning of tolerance in the Safety category carries a wider meaning and goes beyond just "differences" and is about accepting other people's behaviors. All together, the Diversity of people element means that creativity has the ability to flourish when *people with different perspectives and backgrounds come together in an environment that tolerates this diversity*.

The second element, Diversity of opinions, differs from the first element in that it implies that when different opinions are lifted and discussed, creativity arises and new ways and ideas take form. This is stated by Cummings (1965) but also Ekvall (1996) and Evelina who further point to the importance of debates among people. The difference between the two elements also means that diverse opinions may exist without diversity of people. The opposite is also true however, that diverse people with their different backgrounds may generate creative ideas without having different opinions about an issue. We argue however that creativity thrives more when both diversity of people and opinions exist at the same time. To sum up, the Diversity of opinions element means that *alternative solutions should be considered through debates where people share their opinions about a matter.*

5.1.7 Dynamism/Risk-taking

A dynamic climate is one in which people perceive motion in their everyday job since the rate of change and improvement is high. Such an organizational climate constantly asks for enhancement and employees respond to this by being more creative. As such, employees' approach towards problem solving is a creative approach that avoids routine solutions. Moreover, organization members are courageous in taking risks of finding new ways and being creative, as a climate of seeking for continuous improvement includes risky decisions. This interaction can be seen among the elements of this category; one of the elements is Vivid climate, which results in people having a Pioneering attitude towards problems and a Venturous attitude towards taking actions. These attitudes again build the climate. See Table 9 for the category and advocates.

According to Evelina, people's perception in a creative climate is that they are asked to create new ideas and solutions. When two other interviewees, as well as Egan (2005), mentioned that creativity should become a prevalent value within the organization, they refer to the same view. The effect of this attribute, and other attributes of the element such as *sense of urgency* and *climate for excellence*, implies a stirring work atmosphere.

Dynamism/Risk-taking			
		Authors	Interviewees
Vivid climate	**Dynamism/liveliness**	Ekvall, 1996	
	Climate for excellence	Anderson et al., 1992	
	Creativity as a value (creativity should be asked for)	Egan, 2005	Evelina Mia Dag
	Sense of urgency		Evelina Petra
Pioneering attitude	**Encourages employees to find answers creatively**	Roffe, 1999 Egan, 2005	Mia Dag
	****Conforming to routines***		Mia Dag Peter
	Questioning the current situation		Peter Petra Dag
	Seeking for better solutions		Peter
Venturous attitude	**Risk-taking (individual and organization-wide)**	Sternberg et al, 1997 Dutton, 1996 Ekvall, 1996	Dag Peter
	****Resistance against change***		Dag Catharina Petra
	***Excessive rationalism**	Quinn, 1985	

Table 9 The Dynamism/Risk-taking category.

The description of *climate for excellence* by Anderson et al. (1992) characterizes a vivid climate in which improving continuously is prior to fulfilling routine tasks. In addition, *dynamism/liveliness* is one of Ekvall's (1996) dimensions, which is also closely related to the Vivid climate element. In comparison with the interviewees, one difference that is observable is the level of detail of the attributes. Where *climate for excellence* and *dynamism/liveliness* are broad descriptions of a climate having vivid and dynamic qualities, the interviewees named more detailed attributes highlighting different aspects of a vivid climate separately. For instance, two of the interviewees pinpointed *sense of urgency*, which is also a part of Ekvall's (1996) climate dimension. Another example concerns the element Pioneering attitudes, where three interviewees referred to *conforming to routines* as an obstacle, and *seeking for better solution* as a fostering one. These attributes are actually part of Anderson et al.'s (1992) *climate for excellence* attribute. The detailed attributes not only refer to characteristics of a vivid climate, but some of them, more specifically, refer to organization members' attitudes that build a dynamic climate.

This led us to develop the second element that, through detailed attributes, focuses on how people approach problems in a dynamic climate. The pioneering attitudes of people in a dynamic climate, mentioned by Egan (2005) and Roffe (1999), but mostly emphasized by interviewees, are *seeking for better solutions*, *finding answers creatively*, *questioning the current situation* and not *conforming to routines*. One additional clarification regarding this element should be made, and it concerns the *seeking for better solutions* attribute stated by the interviewee Peter. In the Diversity category there exists a similar attribute called *consideration of alternative solutions* mentioned by Cummings (1965) and four of the interviewees. The difference between the attributes is that the former is about continuous improvements and not sufficing with a solution, because it is always possible to evolve and do something in a better manner. The latter means not to go for the first best solution, but to consider other people's ideas as well. So, a vivid climate is *a climate in constant flux that always seeks for improvements,* and a pioneering attitude is *the creative problem-solving attitude that does not conform to routine ways of performing tasks*.

The third element, Venturous attitude, is strongly supported in both literature and empirical findings. The main part of this element, advocated by Sternberg et al. (1997), Dutton (1996), Ekvall (1996), and the interviewee Dag, is the individual act and organization-wide risk-taking attitude. As Sternberg et al. (1997) states, in spite of the probability of failure, taking risk of uncertain creative acts is a necessity. Ekvall (1996) identifies *risk-taking* as an independent dimension to a creative climate. Yet we connect the concept to the dynamic characteristic of the climate, reasoning that a risk-taking approach emerges in organizations that are moving forward in a fast pace. We also believe that risk-taking is not the only venturous attitude necessary for building a creative climate.

In the Venturous attitude element, *excessive rationalism* is a negative attribute mentioned by Quinn (1985). It stands against taking the risk of being creative, which requires unusual and unplanned actions. *Excessive rationalism* is related to, and can lead to, what three interviewees stated as *conforming to routines*. Another venturous attitude is about not being resistant against change. The interesting point is that although this seems to be an influential obstacle with reasonable level of generality, we did not find evidence of confirmation in literature for it, at least not in the works of main authors in the field. However, we believe that resistance against change is indeed an obstacle in the creativity road. Hence, *the Venturous attitude element is about taking risks and being open to the chaos and irrational nature of creativity.*

5.1.8 Organizational Systems and Processes

Organizational Systems and Processes is the biggest category in terms of number of attributes. It includes attributes related to systems and processes, as the name implies, but also to organizational structures (See Table 10). This category contains attributes that indicate how an organization can be designed in order to facilitate creativity. Some

of them can actually be regarded as the implementation side of attributes in other categories.

The first element is called Methods and mechanisms and contains many attributes with the characteristics mentioned in the above paragraph. Few authors that we have encountered discuss about methods and mechanisms of a creative climate, at least not in detail. Amabile (1998) in her *organizational encouragement* scale mentions reward and recognition systems as ways to increase creativity, which will be discussed further down; but other than that, she does not provide a specific suggestion how the organizational systems and procedures should look. The reason for this is probably that each organization must create its own appropriate systems and procedures to build a creative climate. The more specific methods and mechanisms are mostly provided by interviewees that have experience from many different organizations. This has the implication that the methods and mechanisms presented in the element do not provide a complete checklist and the essence of the element is therefore that *organizations should establish appropriate methods and mechanisms that facilitate creativity.*

The second element, Evaluation and Rewarding systems could also be seen as mechanisms or organizational processes. However, since attributes about evaluations and rewards were frequently encountered in literature and interviews, a separate element was formed regarding this specific mechanism. The reason for this obvious popularity is very likely that rewards, especially in the form of recognition, have a strong connection to motivation, which according to Amabile (1998) is one of the three components of creativity.

Organizational Systems and Processes			
		Authors	Interviewees
Methods & mechanisms	***Organizational creativity mechanisms and structured processes***		Malin Dag Petra Mia
	Teamwork		Evelina Dag Mia Catharina
	Methods to enhance creative thinking	Birdi, 2005 McFadzean, 2001 Dutton, 1996	Evelina
	Education	Gordon, 1985	Catharina
	Separate the idea generation function from the idea evaluation function	Cummings, 1965	
	Socail networks	George, 2007	
	Creativity practicing		Mia
	Learning creative actions from other organizations		Mia
	Follow-up actions		Petra
	Volunteerism		Peter
	a clear frame and focus		Peter
Evaluation & rewarding systems	***Inappropriate incentives (e.g. monetary rewards)**	Amabile, 1998 Roffe, 1999 TEDGlobal, 2009 Cummings, 1965	Peter
	Evaluation and recognition of creative performance	Williams, 2001 Amabile, 1998	Dag Catharina Mia
	***Control and improper evaluation systems**	Cummings, 1965	
Organizational structure	**Flat organization**	Cummings, 1965 Andriopoulos, 2001	Malin Catharina
	Flexibility of organizational structure	Cummings, 1965 Gray, 2007	
	Interaction with small barriers, cross-functional work	Feurer, 1996	Catharina
	***Excessive bureaucracy**	Roffe, 1999 Cummings, 1965	
	***Vested interests**	Roffe, 1999	
	***Administrative hierarchy**	Cummings, 1965	

Table 10 The Organizational Systems and Processes category.

One of the obstacles in this element requires some further explanation and that is the *inappropriate incentives*. The main purpose of incentives is that they should appeal to intrinsic motivation (Amabile, 1998). Extrinsic rewards are often monetary, which according to Dan Pink in TEDGlobal (2009) can affect creativity negatively. However, as Amabile (1993) noted, some extrinsic motivators may actually enhance intrinsic motivation. The conclusion from this is that organizations must find out how to intrinsically motivate their employees themselves and figure out what *inappropriate incentives* are from case to case. The element is about *evaluating employees' creative performance in order to reward and recognize accordingly.*

The last element takes an organizational structure perspective. Some of the attributes, like *flat organization* and *excessive bureaucracy*, are very overarching and concern the basic structure of an organization. Others, like *interaction with small barriers*, *cross-functional work*, concern a deeper level and are more specific. The wide spectrum embraced by this element makes a unifying definition impractical. However, since the attributes are quite clear, the reader is advised to turn to each of them when dealing with the organizational structure. The explanation of them and their relationship to creativity were presented in Sections 2.3.8 and 4.1.8.

5.2 Assessment: The Checklist

The second research question is about how to assess the organizational creative climate. The answer to this question is in a form of a checklist that summarizes the main climate dimensions that should be the subject of investigation in organizations. The Checklist will be presented and described in more detail in Chapter 6.

Anderson et al. (1992) developed a checklist that was used to discuss improvement possibilities within groups of organization members. This served as inspiration for our own checklist development, and in the focus group session held at Ekan, we gathered useful data regarding how they can best utilize the Category-Element-Attribute Model for assessment purposes.

The idea to assess a creative climate is not unique, as methods to do that have been developed before; KEYS by Amabile et al. (1996) and CCQ by Ekvall (1996), previously described in Sections 2.4.1 and 2.4.2. There are however a number of deficiencies inherent to these methods, according to the results shown by Moultrie and Young (2009) as well as Lauer (1994). One of them being that different climate dimensions leave different influence on the final creative output of the organization and that the questionnaires do not consider this difference in level of importance (Moultrie and Young, 2009). Based on this, we argue that although all elements in our model are supported by references to be considerable in constructing a creative climate, fulfilling certain elements may not necessarily bring success for the organization. As a result, after discussing this in the focus group as well, we added a part to each checklist block asking about the *perceived* influence of the item on the performance of the organization. In

order to construct a framework for the assessment, we also had to consider and observe the setting as well as strengths of our case company Ekan.

It could be inferred from the focus group session that as management consultants, they have sufficient knowledge about how to gather data from their client companies. In order to gather required data, they use qualitative data gathering methods, such as semi-structured interviews and focus groups more frequently than quantitative methods. According to Mohamed and Rickards (1996), complementary qualitative methods are actually required as complements when using quantitative methods such as CCQ. Piscopo (2008) also uses interviews to complement information gained from KEYS. This led us to conclude that the framework should not assign a specific method or set of methods to perform the assessment task. Instead, the Checklist provides consultants with *suggested* data gathering methods. The existing literature on a number of available frameworks can also inspire them, e.g. Piscopo (2008).

6 Final results

The Final results chapter contains the two parts of the framework: the Category-Element-Attribute Model and the Checklist. It also contains a Gap-Influence Diagram that could be used after the assessment of the climate in order to prioritize improvement efforts.

6.1 The Category-Element-Attribute Model

The model, presented in Table 11, consists of three layers; categories, elements and attributes; and together they illustrate what constitute an organizational creative climate. The attributes written in italic are attributes mentioned during interviews which we have found no support for in literature, but which we still believe are important aspects of a creative climate. Some of the attributes in the model have a negative effect on creativity, so called obstacles; these are recognized by an asterisk in front of the attribute names.

Work Characteristics	
Challenge	Challenge Job complexity Enriched jobs
Freedom	Freedom *Control Freedom to experiment
Responsibility	*Shared and individual responsibility* *Clarity of roles in the organization and in relation to others*
Goals	Participation, involved in goal setting and strategy planning Shared vision, mission and goals *Goal clarity* *Goal oriented* Sense of mutual purpose
Management Support	
Employee support	Supportive and non-controlling supervision Positive, noncontrolling feedback behavior Positive role modeling *Share strategy/goals with employees* Believe in the capability of employees in being creative Perceptive in seeing things from the employees' point of view *Talk the language of your employees* *Keep your employees satisfied* *Open communication with employees*
Involvement & idea support	Participative leaders *Top-management isolation **Management suppress ideas*
Goals	Goal setting associated with creativity Provide clear objectives *Short-time horizons
Management practices	*To use the environment threat inorder to create a sense of urgency* Transformational leadership **Determine adaptive and generative creativity* **Frequently changing the goals*

Co-worker Support	
Co-worker attitude	Support between colleagues Stimulating co-workers *Discuss the problem and build on each others ideas* Idea support *Willingness to listen to others and find new ideas* *Energy directed to solving problems instead of interpersonal relations*
Information sharing	Exchange of information *Secrecy
Safety	
Safe idea expression	Trust/openness Participative safety Okay to fail or make mistakes Free expression of ideas and concerns Freedom to question decisions *Judgment The norm of public exposure to criticism
Safe relations	*Respect and tolerant climate* Playfulness and fun/humour Personal relationships, friendliness and warmth *Infighting, politicing and gossip *Conflicts *Purposive threats
Resources	
Enough time allocation	Time Spend time alone Time pressure
Money	Money
Diversity	
Diversity of people	Diversity In perspectives and backgrounds *Intolerance of differences
Diversity of opinions	Diversity of opinions and debate Consideration of alternative solutions

Dynamism/Risk-taking	
Vivid climate	Dynamism/liveliness Climate for excellence Creativity as a value (creativity should be asked for) *Sense of urgency*
Pioneering attitude	Encourages employees to find answers creatively **Conforming to routines* *Questioning the current situation* *Seeking for better solutions*
Venturous attitude	Risk-taking (individual and organization-wide) **Resistance against change* *Excessive rationalism
Organizational Systems and Processes	
Methods & mechanisms	*Organizational creativity mechanisms and structured processes* *Teamwork* Methods to enhance creative thinking Education Separate the idea generation function from the idea evaluation function Socail networks *Creativity practicing* *Learning creative actions from other organizations* *Follow-up actions* *Volunteerism* *A clear frame and focus*
Evaluation & rewarding systems	*Inappropriate incentives (e.g. monetary rewards) Evaluation and recognition of creative performance *Control and improper evaluation systems
Organizational structure	Flat organization Flexibility of organizational structure Interaction with small barriers, cross-functional work *Excessive bureaucracy *Vested interests *Administrative hierarchy

Table 11 The Element-Category-Attribute Model.

6.2 The Checklist

The Category-Element-Attribute Model presented above lays the foundation for the Checklist which complements the framework by providing a practical tool to utilize the model. The Checklist consists of 29 blocks, each block containing three parts, and is shown in Table 12. The first part is a question regarding the current state of a certain item/aspect of the climate. The users of the Checklist should identify the perceived current situation of the organization or organizational unit. The answer to the first part is used for further comparison purpose and gap analysis. The second part is an assessment of the level of influence the users believe that the item has on the long-term performance

of the organization or unit. The idea of assessing the level of influence emerged in one of the interviews at Ekan. Malin mentioned that since the final mission of consultants in improvement programs is increasing the *performance* of the organization, further improvement efforts are not reasonable unless the creativity item influences the performance. According to the climate definition that we adopt and the constructionistic perspective, what is asked in the two first parts of each block is the *perception* of the climate by the users of the checklist. This perception is in turn based on the perception by the people within the studied organization.

Finally, the last part of the Checklist contains a suggested method for gathering data regarding the specific item. The suggested methods are based on the reviewed data gathering methods presented in Chapter 2, and the characteristics of each item. In general, based on the discussion that will be presented in Section 7.2 regarding the advantages of qualitative data-gathering methods, interview and focus group is preferable comparing to surveys. Interviews are advised in occasions where there is a risk that a person hides or distorts his or her real opinion in front of others. In occasions where this risk is small, group interaction in the form of a focus group is more desired. Document review is advised in the occasions where established codified information is required. Yet, the definite choice of methods is upon the users of the Checklist. Moreover, the users must bear in mind that the Checklist is not designed to be used as a questionnaire. Instead the Checklist should provide the foundation for a discussion that should take place between several people. The design of the Checklist has been developed in cooperation with Ekan who believes that this format suits their way of working.

The Assessing Checklist

	Work Characteristics				
1	To what extent are people assigned to tasks that require them to utilize a wide variety of their skills and that stretch their minds?	Not at all ☐	A little ☐	Very much ☐	Fully ☐
	What is the influence of this item on the unit's performance?	Very Low ☐	Low ☐	High ☐	Very High ☐
	Suggested data gathering method: Interview				
2	To what extent is there a balance between freedom and autonomy, with the rules and routines for how to carry out the work?	Not at all ☐	A little ☐	Very much ☐	Fully ☐
	What is the influence of this item on the unit's performance?	Very Low ☐	Low ☐	High ☐	Very High ☐
	Suggested data gathering method: Interview				
3	To what extent are employees aware of their individual roles and their responsibilities towards each other?	Not at all ☐	A little ☐	Very much ☐	Fully ☐
	What is the influence of this item on the unit's performance?	Very Low ☐	Low ☐	High ☐	Very High ☐
	Suggested data gathering method: Focus group				
4	To what extent are employees involved in goal setting and strategy planning?	Not at all ☐	A little ☐	Very much ☐	Fully ☐
	What is the influence of this item on the unit's performance?	Very Low ☐	Low ☐	High ☐	Very High ☐
	Suggested data gathering method: Interview				
5	To what extent are final vision, mission and goals shared in a clear way with the workforce, in order to create a sense of mutual purpose?	Not at all ☐	A little ☐	Very much ☐	Fully ☐
	What is the influence of this item on the unit's performance?	Very Low ☐	Low ☐	High ☐	Very High ☐
	Suggested data gathering method: Interview				
	Management Support				
6	To what extent do managers support employees by for example considering their point of views, having an open communication and talking their language, believing in their capabilities, keeping them satisfied and providing them with positive feedback?	Not at all ☐	A little ☐	Very much ☐	Fully ☐
	What is the influence of this item on the unit's performance?	Very Low ☐	Low ☐	High ☐	Very High ☐
	Suggested data gathering method: Focus group				
	To what extent do managers involve subordinates in decision-making instead of being isolated and suppress ideas?	Not at all ☐	A little ☐	Very much ☐	Fully ☐

7	What is the influence of this item on the unit's performance?	Very Low ☐	Low ☐	High ☐	Very High ☐
	Suggested data gathering method: Focus group				
	To what extent do managers set clear, long-term and creativity-oriented goals and communicate them with employees?	Not at all ☐	A little ☐	Very much ☐	Fully ☐
8	What is the influence of this item on the unit's performance?	Very Low ☐	Low ☐	High ☐	Very High ☐
	Suggested data gathering method: Focus group				
	To what extent do there exist management practices that enhance creativity, such as creating a sense of urgency among subordinates, stick to goals for a while and transformational leadership?	Not at all ☐	A little ☐	Very much ☐	Fully ☐
9	What is the influence of this item on the unit's performance?	Very Low ☐	Low ☐	High ☐	Very High ☐
	Suggested data gathering method: Interview, or if there is a management team, a focus group				
	Co-Worker Support				
	To what extent do colleagues support each other by for instance listening, discussing, complementing, and supporting others' ideas?	Not at all ☐	A little ☐	Very much ☐	Fully ☐
10	What is the influence of this item on the unit's performance?	Very Low ☐	Low ☐	High ☐	Very High ☐
	Suggested data gathering method: Interview				
	To what extent is energy put on achieving the desired output, instead of being consumed by conflicts or rivalry among individuals?	Not at all ☐	A little ☐	Very much ☐	Fully ☐
11	What is the influence of this item on the unit's performance?	Very Low ☐	Low ☐	High ☐	Very High ☐
	Suggested data gathering method: Interview				
	To what extent do colleagues provide each other with useful information in order to support ideas of one another, instead of keeping information for themselves and their own benefit?	Not at all ☐	A little ☐	Very much ☐	Fully ☐
12	To what extent is this issue influential on the unit's creative climate?	Very Low ☐	Low ☐	High ☐	Very High ☐
	Suggested data gathering method: Interview				
	Safety				
	To what extent do people trust each other and feel safe to express their ideas and concerns without being ridiculed or judged?	Not at all ☐	A little ☐	Very much ☐	Fully ☐
13	What is the influence of this item on the unit's performance?	Very Low ☐	Low ☐	High ☐	Very High ☐
	Suggested data gathering method: Interview				

	To what extent is it acceptable to make mistakes or fail with an idea?	Not at all ☐ A little ☐ Very much ☐ Fully ☐
14	What is the influence of this item on the unit's performance?	Very Low ☐ Low ☐ High ☐ Very High ☐
	Suggested data gathering method: Interview	
	To what extent do respectful warm relations and humor exist among people, instead of conflicts, politicking and gossip?	Not at all ☐ A little ☐ Very much ☐ Fully ☐
15	What is the influence of this item on the unit's performance?	Very Low ☐ Low ☐ High ☐ Very High ☐
	Suggested data gathering method: Interview	
	To what extent is work in the unit characterized by playfulness and people consider working there as fun?	Not at all ☐ A little ☐ Very much ☐ Fully ☐
16	What is the influence of this item on the unit's performance?	Very Low ☐ Low ☐ High ☐ Very High ☐
	Suggested data gathering method: Questionnaire	
	Resources	
	To what extent is enough time allocated to creative actions?	Not at all ☐ A little ☐ Very much ☐ Fully ☐
17	What is the influence of this item on the unit's performance?	Very Low ☐ Low ☐ High ☐ Very High ☐
	Suggested data gathering method: Interview	
	To what extent do ideas get proper financial support in the unit?	Not at all ☐ A little ☐ Very much ☐ Fully ☐
18	What is the influence of this item on the unit's performance?	Very Low ☐ Low ☐ High ☐ Very High ☐
	Suggested data gathering method: Interview	
	Diversity	
	To what extent does the unit contain and tolerate people with different backgrounds, skills and viewpoints?	Not at all ☐ A little ☐ Very much ☐ Fully ☐
19	What is the influence of this item on the unit's performance?	Very Low ☐ Low ☐ High ☐ Very High ☐
	Suggested data gathering method: Interview	
	To what extent are diverse opinions and alternative solutions put forth and debated?	Not at all ☐ A little ☐ Very much ☐ Fully ☐
20	What is the influence of this item on the unit's performance?	Very Low ☐ Low ☐ High ☐ Very High ☐

	Suggested data gathering method: Interview				
	Dynamism / Risk-taking				
21	To what extent does the unit develop continuously in a fast pace?	Not at all ☐	A little ☐	Very much ☐	Fully ☐
	What is the influence of this item on the unit's performance?	Very Low ☐	Low ☐	High ☐	Very High ☐
	Suggested data gathering method: Focus Group				
22	To what extent is creativity a practiced value that is asked for in the unit?	Not at all ☐	A little ☐	Very much ☐	Fully ☐
	What is the influence of this item on the unit's performance?	Very Low ☐	Low ☐	High ☐	Very High ☐
	Suggested data gathering method: Focus Group				
23	To what extent is the unit seeking for better solutions by challenging the status quo instead of acting according to routines?	Not at all ☐	A little ☐	Very much ☐	Fully ☐
	What is the influence of this item on the unit's performance?	Very Low ☐	Low ☐	High ☐	Very High ☐
	Suggested data gathering method: Focus Group				
24	To what extent is risk-taking behavior encouraged over rationalism and change resistance.	Not at all ☐	A little ☐	Very much ☐	Fully ☐
	What is the influence of this item on the unit's performance?	Very Low ☐	Low ☐	High ☐	Very High ☐
	Suggested data gathering method: Focus Group				
	Organizational Systems and Processes				
25	To what extent does the unit have and practice structured creativity-enhancing methods and mechanisms, including methods to enhance creative thinking, follow up actions, clear frame and focus, education, teamwork, social networks and benchmarking creative methods?	Not at all ☐	A little ☐	Very much ☐	Fully ☐
	What is the influence of this item on the unit's performance?	Very Low ☐	Low ☐	High ☐	Very High ☐
	Suggested data gathering method: Interview, complemented by document review				
26	To what extent is the creative performance evaluated and rewarded?	Not at all ☐	A little ☐	Very much ☐	Fully ☐
	What is the influence of this item on the unit's performance?	Very Low ☐	Low ☐	High ☐	Very High ☐
	Suggested data gathering method: Interview, complemented by document review				

	To what extent are employees recognized for their creative efforts?	Not at all ☐	A little ☐	Very much ☐	Fully ☐
27	What is the influence of this item on the unit's performance?	Very Low ☐	Low ☐	High ☐	Very High ☐
	Suggested data gathering method: Interview				
	To what extent is the unit characterized by a flat structure?	Not at all ☐	A little ☐	Very much ☐	Fully ☐
28	What is the influence of this item on the unit's performance?	Very Low ☐	Low ☐	High ☐	Very High ☐
	Suggested data gathering method: Document review/Interview				
	To what extent is work carried out cross-functionally with small barriers to interaction, instead of being performed with excessive bureaucracy and vested interests?	Not at all ☐	A little ☐	Very much ☐	Fully ☐
29	What is the influence of this item on the unit's performance?	Very Low ☐	Low ☐	High ☐	Very High ☐
	Suggested data gathering method: Document review/Interview				

Table 12 The Checklist.

Although an odd number of response alternatives is preferable, the number is often even in climate assessing tools (Mathisen and EInarsen, 2004). We adopt an even number in order to facilitate the overview of the improvement efforts that follow the assessment, forcing creative climate items to be placed in a specific quadrant in the Gap-Influence Diagram, which will be discussed next. Nevertheless the number of response alternatives could be varied to suit the users and the context.

The Category-Element-Attribute Model together with the Checklist constructs the climate assessing framework. In Appendix IV, the Wheel of creativity figure shows the combination of categories and elements of the model with the main aspects of each element that are building the Checklist.

6.3 The Gap-Influence Diagram

Once the assessment of the climate has been made, it can be of great interest to visualize the current creative climate. To facilitate this we, partly based on input from Malin during an interview, created the Gap-Influence Diagram (see Figure 6).

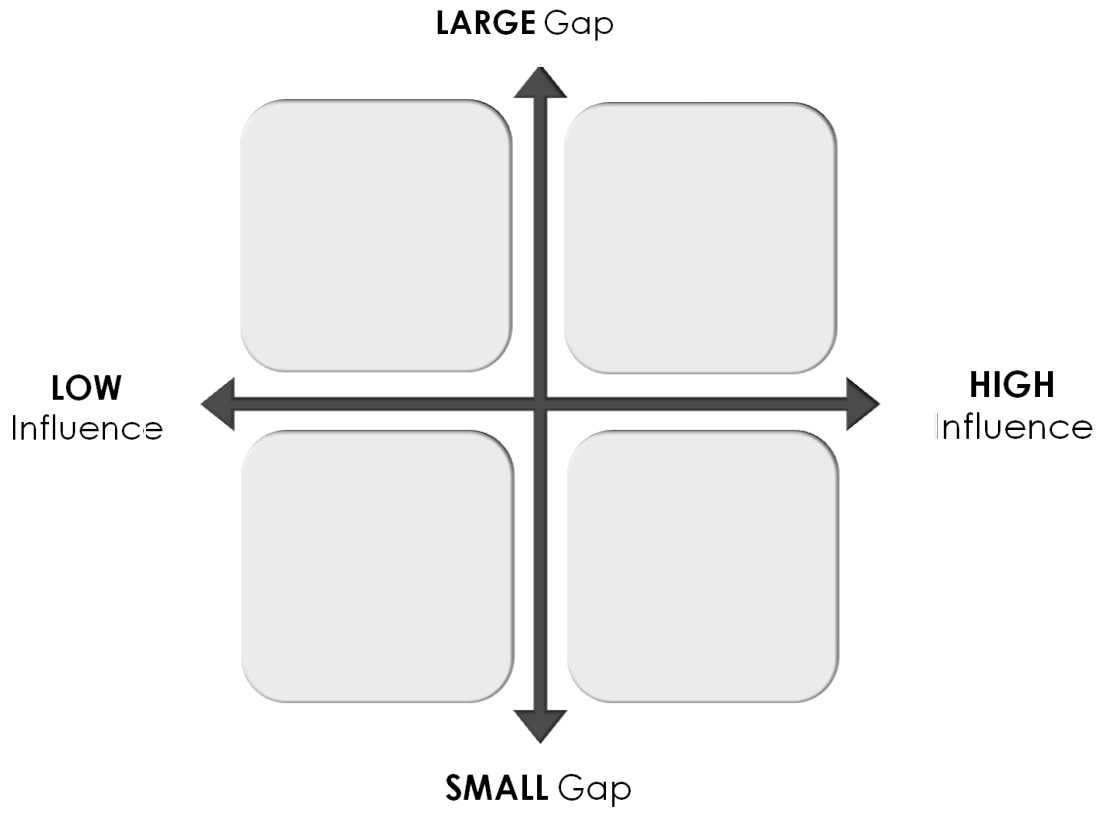


Figure 6 The Gap-Influence Diagram.

The Figure depicts the relation between the influence of a creative item on the performance of a certain unit, with the experienced gap. An item is what each Checklist question refers to and is in many cases the same as an element. The gap axis illustrates the difference between present and desired level of existence of a certain climate item, which can be concluded from the first question in each checklist block. The influence axis refers to how important certain creative items are for the performance of the studied unit. That is, the items as such are assumed to affect creativity, but what is interesting is whether this creativity affects the performance or not. Different organizations and industries have their own way of working and the contexts vary between them. It is therefore safe to assume that the influence of the items is not fixed and can vary depending on which organization that is being studied. Both the influence on the organizational performance and the gap are identified by the investigators during the assessment.

7 Discussion

The purpose of this research was to, through answering our two research questions, construct a foundation for a qualitative framework to assess the climate based on the categorization of the creative climate attributes. The discussion on what this research adds to the current body of theory regarding how to assess climate falls into two parts; a discussion on the categorization of climate attributes, i.e. the Category-Element-Attribute model, and a discussion on the tool to gather data based on the categorization model, i.e. the Checklist. The chapter concludes with a discussion regarding the limitations of the research.

7.1 Categorization: The Category-Element-Attribute Model

Various authors, e.g. Cummings (1965), Gray (2005), Anderson et al. (1992) and Roffe (1999), have classified creative climate dimensions. Yet Ekvall (1996) further used his categorization to develop a questionnaire (CCQ) to measure the creative climate. CCQ is one of the few validated and widely used tools in this field (Moultrie and Young, 2009). As a result, although attributes mentioned by several scholars were gathered and added to the set of climate attributes used in this study, Ekvall's (1996) ten-dimension climate model was the main source of inspiration for us when sorting the climate attributes. Yet, as Lauert (1994) mentions about Ekvall's (1996) model, it is not easy to set clear borders between climate dimensions in the CCQ model. As such, the information gathered through CCQ regarding each dimension might not be reliable since the respondents may misinterpret the meaning of the dimensions. The fact that the users of our framework will be consultants mitigates this risk for the Category-Element-Attribute Model, since consultants have the ability to study the information provided to them regarding the categories. The element and attribute layers of the model help the user to understand the meaning and examples of each category.

Ekvall's (1996) and Amabile et al.'s (1996) creative climate dimensions suffer from being too broad, since each dimension contains various aspects with no specification about which the most important ones are. In this study, while some of the attributes are more general and include many aspects influencing creativity; other attributes specify more detailed characteristics of a creative climate. Even though our categories could be argued to be just as broad as Ekvall's (1996) and Amabile et al.'s (1996), by grouping the attributes in three levels we overcame the shortcomings and further problems of ineffective broadness of the categories.

Based on the gathered contributing attributes, and the downsides of one-layer models, we believe that a three-layer model serves the purpose of providing a thorough picture of general aspects of the climate while providing details of what each aspect contains. Different layers can be utilized for different intentions. The category level of the model is used to illustrate the main aspects of the climate and answer the question, in the most general level, what organizational creative climate is. The element layer has the proper level of specificity to build the Checklist, while the attributes can be referred to when a deeper understanding of the categories and elements is required. Attributes show more

precisely what each element is about. However, each layer cannot be used without considering the wholeness of the model since the existence of all layers together is what keeps the balance between the different levels of detail. Yet even with this three-layer model, we had to skip some attributes of each element when formulating the checklist questions in order not to focus on too detailed aspects. Unfortunately this means losing potential information for where to improve the climate.

Regarding the aforementioned discussion, Table 13 below presents our model categories, CCQ dimensions and KEYS scales. It should be mentioned that in some cases, as was described in Chapter 2 and 5, identical names do not imply that they carry the exact same meanings. Also, even though some categories, dimensions and scales are put in relation to each other in the table, this does neither mean that the meanings are the same. The categories, dimensions and scales differ in broadness and often include different parts of the organizational creative climate. Yet the table is helpful in providing an overall insight about these three categorizations and the differences.

Our Categories	CCQ Dimensions	KEYS Environment Scales
Work Characteristics	Challenge	Challenging Work
	Freedom	Freedom
Management Support		Supervisory Encouragement
Co-workers Support	Idea Support	
Safety	Trust/Openness	*Organizational Impediments
	Playfulness/Humor	
	*Conflict	
Resources	Idea Time	Sufficient Resources
		*Workload Pressure
Diversity	Debates	Work Group Support
Dynamism / Risk-taking	Dynamism / Liveliness	
	Risk taking	
Organizational Systems and Processes		Organizational Encouragement

Table 13 Comparison between our, Ekvall's (1996) and Amabile et al.'s (1996) categorization.

7.2 Assessment: The Checklist

During an interview with Malin, she said, "Management consulting is not an exact science". According to her, much of their work with clients is based on subjectivity and discussions. Therefore, when constructing our framework to assess a creative climate,

we needed something that would suit a consulting firm's abilities and strengths as well as limitations. The Checklist comprises questions that the consultants can use in order to address a defined part of the creative climate, and facilitates discussions and focus the efforts. That is also why the answers to Checklist questions are not in a precise scale format. More specifically, the Checklist and the Category-Element-Attribute Model complement each other. The Checklist is a hands-on method that facilitates the understanding of the model and how to utilize it. It is a way to capture the whole categorization and hence the whole spectrum of the creative climate as we have defined it. It is not a questionnaire meant to be distributed among organization members; the Checklist questions are only meant to guide consultants in their investigations.

While KEYS and CCQ aim to generate statistically valid results in the shape of numbers, our checklist is more concerned with the generation of words, which is closer to how management consultants typically work. This means that the exact values of the items are not what is most interesting, but rather the discussions and findings leading up to the responses. Therefore the Checklist is a qualitative tool that should be used by consultants, as opposed to the quantitative questionnaires KEYS and CCQ meant for organization members. The Checklist can nevertheless still be used by an organization itself, but it would require the users to acquire sufficient knowledge about the framework and the theories around it. They must also invest the necessary resources if the assessment should be of value for them. This is why the framework is mainly meant to be used by management consultants.

The benefits of having a qualitative method was highlighted during the focus group session, including the possibilities it offers regarding providing a ground for discussions, to influence the data gathering process, and to simultaneously facilitate the improvement phase that follows. During an interview, Malin said that "it is so important for a consultant to discuss [with other consultants] what [a certain answer to] a question means". We have had that in mind while constructing the Checklist. Hence, the questions in the Checklist are meant as a discussion foundation and not to identify an exact level of items, as was mentioned above. The Checklist can still however include quantitative data collection methods like questionnaires to complement the rest of the data.

Moreover, Amabile et al. (1996) mention how KEYS can advantageously be used together with other data collection methods, such as interviews or other questionnaires. We believe that this is necessary since raw data only tend to provide indications of the situation without the required depth. This is also in accordance with the results of the research conducted by Mohamed and Rickards (1996) that identified the polarized characteristic of the findings of CCQ and the necessity of utilizing further methods for more precise results. Once the KEYS and CCQ questionnaires have been answered, further investigation is likely necessary to find out *why* the climate is the way it is. A qualitative approach like our checklist has the possibility to capture this already in the data gathering process. By answering the questions in the Checklist through discussions, the consultants can find out problematic areas that need improvement. The model will

act as a complement to the Checklist and be of great help for them when trying to understand the climate.

Another facet of using a qualitative approach is that the answers generated from the data collection methods for each checklist question may vary between different people. A reason could be that people perceive or talk about their work climate differently. It is then of great value for consultants to investigate and find out the reasons for these discrepancies. When the aim of the assessment is to improve the creative climate it is necessary to change the individuals' perceptions that goes against the creative climate. Finding out the root causes for the discrepancies in perceptions is therefore helpful. The considerable role of finding the mismatches in directing the further investigations of the consultants was expressed by Malin as well.

Furthermore, the suggested data gathering methods for each question are merely suggestions, based on the benefits and downsides of each method. The users of the checklist are free to choose how they best can gather relevant data regarding each checklist question. As was elucidated in Section 2.4.3, Piscopo (2008) mentioned three cases that combined different data gathering methods in various ways to assess the creative climate. Piscopo (2008) also described a certain kind of data gathering method where a cross-functional and cross-level team is trained in order to identify creativity signs in the organizational setting through observations and/or informal interviews. The framework could also suit such a team and in many cases an internal organization team might even have a deeper understanding of the organizational context then an external project team. A downside could be that an internal team sometimes is blind to defects in their own work and might also suffer from being too subjective.

Our checklist further considers the influence the creative items have on the performance of the organization. This is likely not a straightforward task and it requires a deep understanding of the organization in order to make a reasonable appreciation. Moultrie and Young (2009) mentioned that one of the downsides of CCQ and KEYS is that all attributes are not at the same level of importance. The questions regarding the influence of the items in the Checklist overcome this downside while at the same time providing a strong base for how to prioritize the future improvement actions through the Gap-Influence Diagram.

After using the framework to gather relevant data, the Gap-Influence Diagram helps the organization to detect what needs the most attention at the moment in the unit studied. The items to focus on are not necessarily the ones where a large gap exists simultaneously with a large influence on the performance. In some cases and organizations it could be more relevant to focus on the current strengths instead of putting efforts on improving the weaknesses. It might also be that some creative items are interrelated and it is impossible to improve one without affecting another. This was discussed during the focus group session as well. One possible way for how to prioritize the items in the diagram is to map the relation among the items that are identified as

being critical. Investigating, or even measuring, the interrelation among critical items on creative climate is inspired by the work of Sundgren et al. (2005). Yet, how to attend to the results of the diagram must be decided upon in each specific case.

7.3 Framework limitations

What the business world asks for and use is not always supported firmly by literature. This can be due to different approaches that these two worlds adopt. While a scientific research requires the results to be derived from a scientific method; what counts in the business world is the applicability of the results. This research was designed in collaboration with a management consultancy firm and the framework is mainly intended to be used by practitioners, but based on a theoretical foundation. Since the method and design of the research stands in the borderline between the two worlds, keeping the balance to fulfill the expectations of both sides was not an easy task.

The Checklist is much based on the methods by which Ekan works and has not been tested in other settings. We believe however that the general nature of the questions in the Checklist makes it a valuable tool for anyone who wishes to assess a creative climate within an organization. What adds to this is the wide experience of Ekan consultants from many different fields and businesses.

Furthermore, the result of the framework is the assessment of the current situation of the organizational climate. Further programs are needed in order to improve the defective areas detected by the framework. Yet the framework does not support improvement efforts.

8 Conclusions and further research

We set out with the aim to create a foundation for a framework that would identify what constitutes a creative climate, and through mainly qualitative methods could assess the current state of such a climate. The result is a framework consisting of a three-layer model over the components of a creative climate and a checklist for assessing it. A Gap-Influence Diagram also illustrates the situation of the climate items, which the organization can base the further prioritization of the improvement efforts on.

Together with Ekan we were able to develop a framework in accordance with the purpose and that is both easy to use and to understand. The assessment part of it, i.e. the Checklist, consists of 29 blocks, each containing one question regarding an item and one regarding the influence of the item on the organizational performance. Methods to collect the answers are suggested and comprise interviews, focus groups and document reviews. The Checklist give rise to discussions and provides a diagnosis to the current state of the creative climate beyond what one normally obtains when using quantitative tools. However, it is recommended that the Checklist is used together with the Category-Element-Attribute Model since the model facilitates the understanding and usage of the Checklist. The understandability and overview of the model was enhanced by the categorization of the climate attributes into elements and categories, resulting in a three-layer model over a creative climate.

With the framework, the user should be able to grade an organization's creative climate in respect to eight different dimensions: Work Characteristics, Management Support, Co-worker Support, Safety, Resources, Diversity, Dynamism/Risk-taking and Organizational Systems and Processes. Not only is the framework meant to clarify the organization's position in all eight dimensions, it also helps to investigate the importance of each in relation to the organization. The Gap-Influence Diagram then makes it possible to decide what to focus on and in which order to tackle the problems.

In further research we would like to see the framework tested, to determine the usability and value of it. This includes investigating whether the Category-Element-Attribute Model is comprehensive enough or if it needs revision, and if the answers to the questions in the Checklist provide a desirable result. The framework should also be tested in different businesses and different parts of an organization to find out whether it needs to be customized to different settings. Finally it would be interesting to examine the influence of national culture on the framework to see if it is suitable to use in any country.

9 List of tables

Table 1. CCQ's ten creative climate dimensions…….. 19

Table 2. KEYS's eight creative climate scales…….. 20

Table 3. Table of Work Characteristics Category…….. 42

Table 4. Management Support Category…….. 45

Table 5. Co-worker Support Category…… 47

Table 6. Safety Category…….. 48

Table 7. Resources Category…….. 50

Table 8. Diversity Category…….. 51

Table 9. Dynamism/Risk-taking category…….. 53

Table 10. Organizational Systems and Processes category…….. 56

Table 11. The Element-Category-Attribute Model…….. 60

Table 12. The Checklist…… 64

Table 13. Comparison between our, CCQ and KEYS categorization…….. 71

10 List of figures

Figure 1. The eight organizational creative climate categories…… 9

Figure 2. The research process…….. 24

Figure 3. The underlying structure of the three-layer model…… 28

Figure 4. Phases of the consulting process…….. 39

Figure 5. The analysis process…… 41

Figure 6. The Gap-Influence Diagram…….. 69

11 List of references

Ackoff, R. L. & Vergara, E. 1981. Creativity in Problem Solving and Planning: A Review. *European Journal of Operational Research,* 7**,** 1.

Amabile, T. M. 1993. Motivational Synergy: Toward New Conceptualizations of Intrinsic and Extrinsic Motivation in the Workplace. *Human Resource Management Review,* 3**,** 185.

Amabile, T. M. 1997. Motivating creativity in organizations: On doing what you love and loving what you do. *California Management Review***,** 39-58.

Amabile, T. M. 1998. How to kill creativity. *Harvard Business Review,* 76**,** 76.

Amabile, T. M. & Conti, R. 1994. Environmental determinants of work motivation, creativity, and innovation: The case of R&D downsizing. *Technological Oversights and Foresights Conference.* Stern School of Business, New York University.

Amabile, T. M., Conti, R., Coon, H., Lazenby, J. & Herron, M. 1996. Assessing the work environment for creativity. *Academy of Management Journal,* 39**,** 1154.

Anderson, J. V. 1992. Weirder than Fiction: The Reality and Myths of Creativity. *The Executive,* 6**,** 40.

Anderson, N., Hardy, G. & West, M. 1992. Management Team Innovation. *Management Decision,* 30**,** 5.

Andriopoulos, C. 2001. Determinants of organisational creativity: A literature review. *Management Decision,* 39**,** 834.

Bharadwaj, S. & Menon, A. 2000. Making innovations happen in organizations: Individual creativity mechanisms, organizational creativity mechanisms or both? *The Journal of Product Innovation Management,* 17**,** 424.

Birdi, K. S. 2005. No idea? Evaluating the effectiveness of creativity training. *Journal of European Industrial Training,* 29**,** 102-111.

Bryman, A. & Bell, E. 2007. *Business research methods,* New York, Oxford University Press.

Cook, P. 1998. The creativity advantage - is your organization the leader of the pack? *Industrial and Commercial Training,* 30**,** 179.

Corporate Research Foundation 1996. *Corporate strategies of the top 100 UK companies of the future,* New York, McGraw-Hill Publishing Co.

Csikszentmihalyi, M. 2009. Implications of a systems perspective for the study of creativity. *In:* Sternberg, R. J. (ed.) *Handbook of creativity.* New York: Cambridge University Press.

Cummings, A. & Oldham, G. R. 1997. Enhancing creativity: Managing work contexts for the high potential employee. *California Management Review***,** 22-38.

Cummings, L. 1965. Organizational Climates for Creativity. *The Academy of Management Journal,* 8**,** 8.

D'Aveni, R., A., Canger, J., M. & Doyle, J., J. 1995. Coping with hypercompetition: Utilizing the new 7S's framework1. *The Academy of Management Executive,* 9**,** 45.

Daly, K. 1997. Re-Placing Theory in Ethnography: A Postmodern View. *Qualitative Inquiry,* 3**,** 23.

de Bono, E. 1995. Serious creativity. *The Journal for Quality and Participation,* 18**,** 12.

de Jong, J. & den Hartog, D. 2010. Measuring Innovative Work Behaviour. *Creativity and Innovation Management,* 19**,** 23.

Denison, D. R. 1996. What is the difference between organizational culture and organizational climate? A native's point of view on a decade of paradigm wars. *Academy of Management. The Academy of Management Review,* 21**,** 619.

Drazin, R., Glynn, M. A. & Kazanjian, R. K. 1999. Multilevel theorizing about creativity in organizations: A sensemaking perspective. *Academy of Management. The Academy of Management Review,* 24**,** 286.

Dubois, A. & Gadde, L.-E. 2002. Systematic combining: An abductive approach to case research. *Journal of Business Research,* 55**,** 553.

Dutton, G. 1996. Enhancing creativity. *Management Review,* 85**,** 44.

Egan, T. M. 2005. Factors Influencing Individual Creativity in the Workplace: An Examination of Quantitative Empirical Research. *Advances in Developing Human Resources,* 7**,** 160.

Ekvall, G. 1996. Organizational Climate for Creativity and Innovation. *European Journal of Work & Organizational Psychology,* 5**,** 105.

Ekvall, G. 1997. Organizational Conditions and Levels of Creativity. *Creativity and Innovation Management,* 6**,** 11.

Farr, J. L. 1990. Facilitating individual role innovation. *In:* West, M. & Farr, J. L. (eds.) *Innovation and creativity at work.* Jone Wiley and Sons Ltd.

Feurer, R., Chaharbaghi, K. & Wargin, J. 1996. Developing creative teams for operational excellence. *International Journal of Operations & Production Management,* 16**,** 5.

Ford, C. M. 1996. A theory of individual creative action in multiple social domains. *Academy of Management. The Academy of Management Review,* 21**,** 1112.

George, J. M. 2007. Creativity in Organizations. *The Academy of Management Annals.* London: Routledge.

Ghiselin, B. 1963. Ultimate Criteria for Two Levels of Creativity. *In:* Taylor, C. W. & Barron, F. (eds.) *Scientific Creativity.* New York: Wiley and Sons.

Girotra, K., Terwiesch, C. & Ulrich, K. T. 2010. Idea Generation and the Quality of the Best Idea. *Management Science,* 56**,** 15.

Gordon, G. G. 1985. The Relationship of Corporate Culture to Industry Sector and Corporate Performance. *In:* Kilmann, R. H., Saxton, M. J. & Serpa, R. (eds.) *Gaining Control of the Corporate Culture.* San Francisco: Jossey-Bass Inc.

Gray, R. 2007. *A Climate of Success: Creating the Right Organizational Climate for High Performance,* Oxford, Butterworth-Heinemann.

Horsburgh, D. 2003. Evaluation of qualitative research. *Journal of Clinical Nursing,* 12**,** 6.

IdeaConnection. 2010. *K-J Method* [Online]. Available: http://www.ideaconnection.com/thinking-methods/k-j-method-00011.html [Accessed 2011-06-17].

Isaksen, S. & Ekvall, G. 2010. Managing for Innovation: The Two Faces of Tension in Creative Climates. *Creativity and Innovation Management,* 19**,** 73.

Isaksen, S. G., Lauer, K. J., Ekvall, G. & Britz, A. 2001. Perceptions of the Best and Worst Climates for Creativity: Preliminary Validation Evidence for the Situational Outlook Questionnaire. *Creativity Research Journal,* 13**,** 171 - 184.

Jones, A. P. & James, L. R. 1979. Psychological climate: Dimensions and relationships of individual and aggregated work environment perceptions. *Organizational Behavior and Human Performance,* 23**,** 201-250.

Kubr, M. 2002. *Management Consulting: A guide to the profession,* Geneva, International Labour Office.

Lauer, K. J. 1994. *The Assessment of Creative Climate: An Investigation of the Ekvall Creative Climate Questionnaire.* Master thesis, State University of New York.

Luecke, R. 2003. Managing Creativity and Innovation. Boston: Harvard Business School Press.

Magadley, W. & Birdi, K. 2009. Innovation Labs: An Examination into the Use of Physical Spaces to Enhance Organizational Creativity. *Creativity and Innovation Management,* 18**,** 315.

Martin, J. 2002. Organizational Culture: Mapping the terrain. Thousand Oaks: Sage Publications, Inc.

Mathisen, G. E. & Einarsen, S. 2004. A Review of Instruments Assessing Creative and Innovative Environments Within Organizations. *Creativity Research Journal,* 16**,** 119 - 140.

McFadzean, E. 2001. Critical factors for enhancing creativity. *Strategic Change,* 10**,** 267.

Mohamed, Z. M. & Rickards, T. 1996. Assessing and comparing innovativeness and creative climate of firms. *Scandinavian Journal of Management,* 12**,** 13.

Moultrie, J. & Young, A. 2009. Exploratory Study of Organizational Creativity in Creative Organizations. *Creativity and Innovation Management,* 18**,** 299.

Mumford, M. D. & Gustafson, S. B. 1988. Creativity Syndrome: Integration, Application, and Innovation. *Psychological Bulletin,* 103**,** 27.

Ohly, S., Sonnentag, S. & Pluntke, F. 2006. Routinization, work characteristics and their relationships with creative and proactive behaviors. *Journal of Organizational Behavior,* 27**,** 257.

Oldham, G. R. & Cummings, A. 1996. Employee creativity: Personal and contextual factors at work. *Academy of Management Journal,* 39**,** 607.

Paulus, P. B. & Nijstad, B. A. (eds.) 2003. *Group creativity: Innovation through collaboration,* New York: Oxford University Press.

Piscopo, V. 2008. *An Innovation Culture Assessment Plan for a Department of a Fortune 500 Company.* Master thesis, Buffalo State College.

Quinn, J. B. 1985. Managing innovation: controlled chaos. *Harvard Business Review,* 63**,** 73-84.

Rasulzada, F. 2007. *Organizational creativity and psychological well-being.* Doctoral thesis, Lund University.

Roffe, I. 1999. Innovation and creativity in organisations: a review of the implications for training and development. *Journal of European Industrial Training,* 23**,** 224.

Schneider, B. 1987. The People Make the Place. *Personnel Psychology,* 40**,** 437.

Schneider, B. 2000. The Psychological Life of Organizations. *In:* Ashkanasy, N. M., Wilderom, C. P. & Peterson, M. F. (eds.) *Handbook of Organizational Culture and Climate.* London: Sage.

Schneider, B., Brief, A. P. & Guzzo, R. A. 1996. Creating a climate and culture for sustainable organizational change. *Organizational Dynamics,* 24**,** 6.

Scott, S. G. & Bruce, R. A. 1994. Determinants of innovative behavior: A path model of individual innovation in the workplace. *Academy of Management Journal,* 37**,** 580.

Shalley, C. E. 2008. Creating Roles: What Managers Can Do to Establish Expectations for Creative Performance. *In:* Zhou, J. & Shalley, C. E. (eds.) *Handbook of Organizational Creativity.* New York: Taylor & Francis Group.

Sternberg, R. J. & Lubart, T. I. 1999. The concept of creativity: Prospects and paradigms. *In:* Sternberg, R. J. (ed.) *Handbook of creativity.* Cambridge: Cambridge University Press.

Sternberg, R. J., O'Hara, L. A. & Lubart, T. I. 1997. Creativity as investment. *California Management Review***,** 8-21.

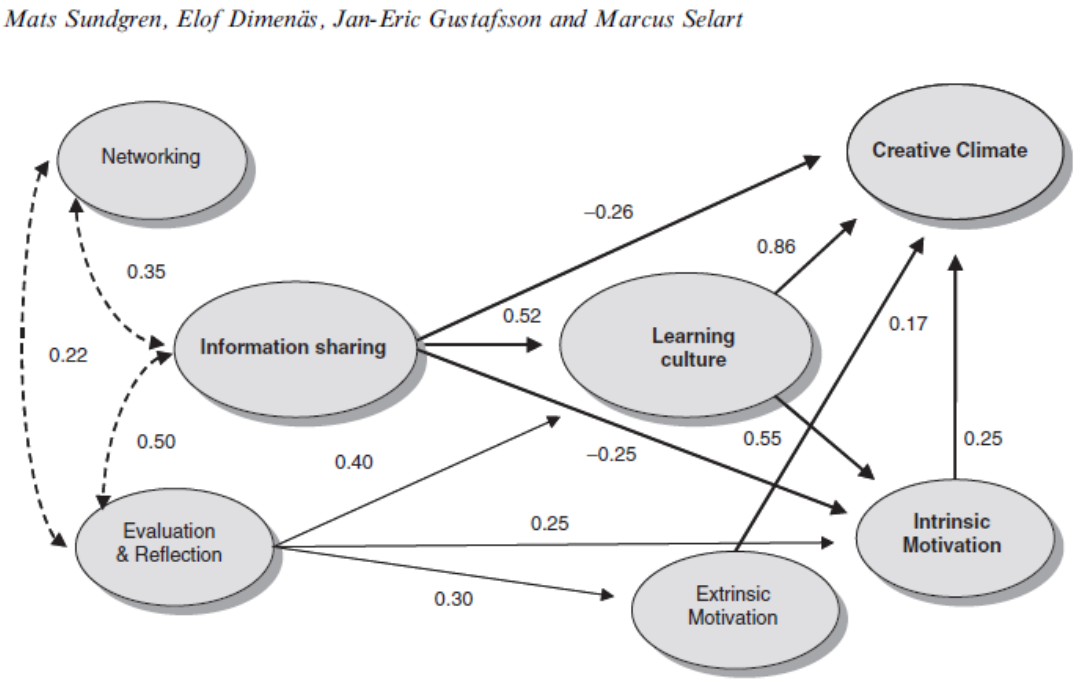
Sundgren, M., Dimenäs, E., Gustafsson, J. & Selart, M. 2005. Drivers of organizational creativity: a path model of creative climate in pharmaceutical R&D. *R&D Management,* 35.

TEDGlobal 2009. Dan Pink on the surprising science of motivation.
Thomas, A. B. 2006. *Research Concepts for Management Studies,* London, Taylor & Francis Group.
Watkin, C. & Hubbard, B. 2003. Leadership motivation and the drivers of share price: the business case for measuring organisational climate. *Leadership & Organization Development Journal,* 24**,** 380.
West, M. A. 1990. The social psychology of innovation in groups. *In:* West, M. A. & Farr, J. L. (eds.) *Innovation and creativity at work.* Jone Wiley and Sons Ltd.
Williams, S. 2001. Increasing employees' creativity by training their managers. *Industrial and Commercial Training,* 33**,** 63.
Woodman, R. W., Sawyer, J. E. & Griffin, R. W. 1993. Toward a theory of organizational creativity. *Academy of Management. The Academy of Management Review,* 18**,** 293.
Workforce 2002. Douglas McGregor: Theory X and Theory Y. *Workforce,* 81**,** 32.
Zhou, J. & Jennifer M. George 2001. When job dissatisfaction leads to creativity: Encouraging the expression of voice. *Academy of Management Journal,* 44**,** 682.
Zhou, J. & Shalley, C. E. (eds.) 2008. *Handbook of Organizational Creativity,* New York: Taylor & Francis Group.

12 Appendices

This Chapter contains five appendices: the path model of organizational creativity, the interview guide, the focus group guide, a description of the interviewees, and the Wheel of Creativity.

12.1 Appendix I: The path model of organizational creativity



The path model is from Sundgren et al., (2005).

12.2 Appendix II: The interview guide

1. What is your job description? Tell us about your work. [The job experience in Ekan, way of working (teams, individual…), the position, whether the job is routine or creative]

2. What do you think creativity is?

3. Have you had the experience of working in, or knowing of, any project that you believe the Ekan working team was creative in it?

4. How was the work carried out in the team that makes you think it was creative? (Give us example)

5. What attributes help the emergence of creativity in the team? (We can mention climate attributes as hints.)

6. Do you ever experience situation that you think you were not creative enough? (Explain more)

7. Do you want to be more creative?
   If yes, then have you ever thought how you could be more creative?

8. Have you ever had the experience of a client who you identify as being creative?

9. What are the client's characteristics that make it creative in your opinion? Elaborate more the characteristics that are climate attributes.

12.3 Appendix III: The focus group guide

Purpose: construct a framework that contains ways to assess and maybe visualize the creative climate in organizations that wish to become more creative and determine each creative category's importance.

Materials provided: paper, colored pens, ink pens and the tables of creative climate attributes.

Time required: 2 hours

Schedule:

Present the creative climate material

Discussing the questions regarding different aspects of the framework

- *Who should data be gathered from?*
- *How should each category be assessed?*
- *How should the level of importance be measured?*
- *How extensive should the data gathering process be?*

Focus group wrap-up

12.4 Appendix IV: The interviewees

During our data gathering process we conducted seven interviews with seven different persons, as well as a focus group session with three of them. Below is a short description of each person and their role in Ekan. The interviewees were selected by Malin in order for us to get a good sample of persons with different backgrounds, job positions and experiences.

Malin has been the supervisor of this project at Ekan. She was mainly interviewed because of the same reasons as other interviewees, however, a part of her interview was spent on describing necessary information regarding how the organization functions. She is one of the five persons that form the management team in Ekan and is responsible for marketing and business development. She is 31 years old and has been working in Ekan for seven years. 40 percent of her time is spent in the management function and 60 percent as a management consultant.

Dag is the CEO of Ekan and one of the founders. He is also part of the management team. Dag works mainly with developing services for clients, but 20 percent of the time he works as a management consultant. He is 54 years old and has been working in Ekan since the start, 26 years ago.

Mia is also a part of the management team and has, just as Dag, been in the company for 26 years. She is 49 years old and is responsible for the sales function in Ekan. She works as a management consultant 30 percent of her time.

Petra is 33 years old and has been working for eight years in Ekan. She is one of the five coaches who guide other consultants in their careers. Most of her time however, she is working as a management consultant.

Peter is 31 years old and is working full time as a management consultant. He has been in the company for three years. He is not yet specialized in any specific area but his field of interest is information and knowledge transfer.

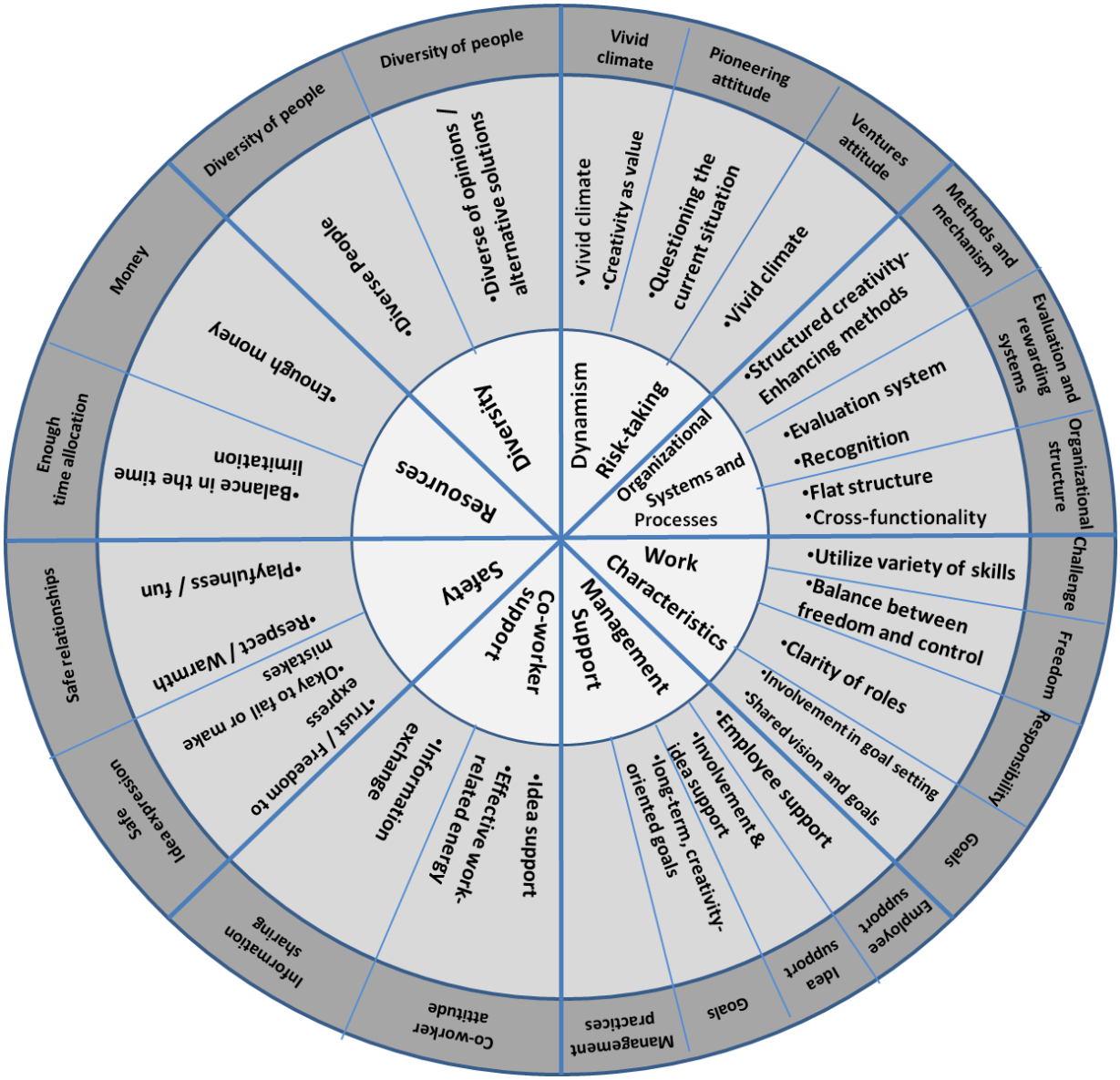
Evelina is also working full time as a management consultant, specialized in change processes. She is 43 years old and after many years of experience in the management field, she joined Ekan two years ago.

Catharina, just as Evelina, is working full time as a management consultant and is specialized in change processes, but also in holding workshops. She is 55 years old and has been in Ekan for one and a half year.

Dag, Malin and Peter were the ones that also participated in the focus group session.

12.5 Appendix V: Wheel of Creativity

The framework to assess organizational creative climate



The two building blocks of the framework are combined and linked in this figure. The core layer of the figure represents the category layer of the Category-Element-Attribute Model. The outside layer shows the elements. The middle layer highlights the main aspects of the Categories that the Checklist asks about and should be investigated in the organizational climate.