Structure and Creativity in Innovation Processes

A qualitative study on decision making of innovation managers when balancing structure and creativity in innovation processes

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Executive Summary

This thesis looks at the field of challenges in innovation management and decision making in order to increase the understanding of how innovation managers balance the contradictory elements of structure and creativity in innovation processes. Thereby, the focus lies on innovation managers on the operational level having to deal with the elements of structure and creativity in the innovation process and the influence the organizations’ structure has on this.

The thesis begins with an illustration of the importance of innovations for organizations and provides a clear definition of innovations as a process. An examination on innovation processes shows the need for numerous decisions to be made as innovations constitute a challenge for managers. Therefore, this thesis highlights one challenge and explores literature on two important and contradictory elements in innovation processes: creativity and structure. The role of structure in this context is two-sided. On the one hand, structure is an important element of innovation processes. On the other hand, structure can influence the decision making of innovation managers when balancing the contradictory elements. In order to understand the influence on decision making, the study concentrates on the decision types of programmed and non-programmed decisions, which are also utilized to evaluate how innovation managers are influenced by the structure in an organization.

The study is of qualitative nature and has a mainly inductive approach. Seven semi-structured interviews were conducted in order to gain insights of innovation managers in charge of innovation processes. Decision types and actions on creativity, which are part of the theoretical framework, were utilized in order to analyze the selected material. This analysis, showing similarities to a thematic analysis, allowed to interpret the material in order to conclude and answer the research question.

The results showed that, on an operational level, there is not a contradictory linkage between structure and creativity as highlighted in the literature. Rather, the structural procedures of reporting systems and plans serve as a support for innovation managers by being subject to programmed decisions. By this, innovation managers do not have to spend time on making decisions regarding the structure, but can rather focus on actions which aim to enhance creativity. Therefore, our findings showed that structure serves as a lever for creativity in innovation processes.
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1 INTRODUCTION

1.1 Problem Background
An early assumption about innovation was made in 1934 by Schumpeter (1934, cited in Drejer, 2004, p. 556), who stated that “economic development is driven by the discontinuous emergence of new combinations (innovations) that are economically more viable than the old way of doing things” and thus, that innovations allow a more viable economic situation than the previous procedures allowed. Innovation has a meaningful role for all economies since it can be understood as the driver of growth (Baumol, 2002). Hence, innovations have a significant impact on individuals, societies and especially on organizations as a driver for progress and competitive advantage. In line with this view, Johnson et al. (2014, p. 295) state that innovations are essential for today’s economy and society as they create value through inducing continuous progress and change. Since today’s organizations operate in environments that face numerous changes due to their users, technologies as well as competition, these firms need to regenerate their business in order to survive and flourish (Danneels, 2002, p. 1095). Therefore, quick response towards changes by innovations enables companies to make use of arising opportunities and by this directions are given to organizations which they follow in the long run (Prahalad & Hamel, 1990, p. 81). Therefore, innovations are crucial for businesses as they allow adaptation to environmental changes and organizational growth.

Given the importance of innovations for organizations, research has been conducted examining the management of innovations from several points of view in order to gain a deeper understanding of the topic. The definitions of innovation made in the vast literature varies. A more recent definition by Freeman & Engel (2007, p. 94) describes innovation as the creation of customer value by developing an initial idea and launching it into the market. Furthermore, innovation can be understood in a broader sense as “the successful exploitation of new ideas” (DTI, 1994 cited in Francis & Bessant, 2005, p. 171). An earlier definition made by van de Ven (1986, p. 591) describes innovations as the evolvement and implementation of novel ideas, which are generated by people and as their interactions undertaken within organizations. Although not all authors agree on one specific definition, it is evident that the latter definition presenting innovation as a process taking place over time (van de Ven, 1986, p. 591), provides a commonly used view on innovations in the literature. Research also states that innovation processes are complex phenomena, as they involve the coordination of many different aspects such as resources, time, knowledge and capabilities (Dias et al., 2014, p. 1068; Tidd & Bessant, 2014, p. 86). Innovation processes aim to generate innovation output, which can differ due to the innovation type (Trott, 2012, pp. 15-17). Thus, innovations can be subject to such outcome leading to products, processes or services (Tidd et al., 2001, pp. 6-8). In line with the common understanding of innovation in research, we define innovation as a process which provides a solid and generic basis when looking upon innovations resulting in a product innovation. Thus, we focus on product innovations, as this innovation type is suggested as an especially powerful way in dealing with the dynamic environment (Cheng et al., 2013, p. 2561) we mentioned before.

Innovation processes can practically be handled in various different ways, however, in order to find the most suitable solutions, a proper management is needed throughout this complex process (Bessant, 2003, p. 762). While general management processes include planning, coordinating, leading and controlling (Rue & Byars, 1992, p. 52), innovations also hold various challenges for the management (Dodge, 2000, p. 17). These
challenges arise from the need of managing contradicting aspects of activities within the innovation process (Bledow et al., 2009, p. 305). The challenges of innovation managers to handle opposing aspects can arise at different levels within an organization. On the strategic level, managers are concerned with the strategic challenges innovations can imply, such as the exploitation of the organization's capabilities on the one side and the exploration of new possibilities on the other side (Andriopoulos & Lewis, 2009, p. 696; Tushman & O’Reilly, 1996, p. 8, 11; March, 1991, 71). However, challenges of innovation management also occur on the operational level (Hunter et al., 2011, p. 54), where managers have to deal with such opposing elements on a daily basis. While contradictory challenges on the strategic level can be resolved by for instance, separating exploitative and explorative activities in different departments (O’Reilly, 1996, p. 25), the challenges on the operational level cannot be separated and thus, have to be dealt with simultaneously. Literature has largely dealt with challenges on a strategic level, rather than the operational one. In order to expand the knowledge in this area and to examine how the contradicting and seemingly unresolvable aspects of innovations are managed simultaneously, we will focus on managers on an operational level and the daily tasks and actions. More precisely, we will examine operational managers being in charge for managing innovation processes to which we refer as innovation managers.

When looking upon the challenges the innovation manager faces on the operational level, one main contradiction evolves through the fact that an innovation process consists of two interrelated main but opposing elements: creativity and structure (Freeman & Engel, 2007, 95). On the one hand, innovation processes require creativity as generating new ideas and embracing new possibilities can be understood as a core aspect of innovations (Tidd & Bessant, 2014, pp. 85-86). Creativity in innovations holds first the generation of a novel idea, which is followed by its implementation (Baer, 2012, p. 1102). On the other hand, innovation processes require structure (Tidd & Bessant, 2014, pp. 85-86). In this thesis, the term structure implies standardized procedures, which set the way in which work is executed. Structures are important in organizations as they provide a consistent way of task execution and thus, improve the overall effectiveness of an organization (March, 1991 cited in Gilson et al., 2005, p. 522). More precisely, organic structures are perceived as being more agile and less formal, whereas mechanistic structures tend to be rather formal and inflexible (Green et al., 2000, p. 148). These elements are opposing as creativity requires autonomy and flexibility to strive for newness and develop new ideas since creative individuals prefer to work in their own way (Hunter et al., 2011, p. 54; Bledow et al., 2009, p. 308), whereas structure enforces people to work within clear patterns of standardized routines (Bledow et al., 2009, p. 308). Finding the right balance between these two elements in the innovation process and managing them simultaneously is crucial for the success of an innovation (Green et al., 2000, p. 148).

When focusing on creativity and structure in innovations, it is also necessary to take into consideration, that structure in this context can be seen as a coin with two sides. In general, structure can be seen as one way, among others, of managing innovation. However, on the one side of the coin organizational structure ensures solid procedures in daily businesses leading to efficiency, while the other side of the coin is in need of structure allowing exuberant and creativity-supporting procedures in order to foster innovations. (Green et al., 2000, p. 148) It needs to be highlighted that structure is the result of a long-term evolvement and therefore can be understood as being embedded in an organization (Cyert & March, 1994, p. 122). Cyert & March (1994, p. 122) describe four standard operating procedures (SOP) which form the general structure in an organization and often prescribe decisions. This, in turn affects the decision making of an
innovation manager as the manager is of high importance throughout the entire innovation process and thus, is taking over the responsibility for the balancing act between creativity and structure. Therefore, when examining the balancing act of the innovation manager between creativity and structure, it is essential to investigate the structure of the organization as the balancing act is not only dependent on the innovation manager but also on the prerequisites set by the organization, more precisely the structure. It needs to be noted, that in order to investigate structure in organizations which grew over time, it is necessary to look upon established companies. This leads to an exclusion of young companies, respectively startups, since these do not possess a solid embedded structure.

In addition to challenges arising from the balancing act, innovation managers are concerned with numerous problems, which are related to further aspects like ideas, employees and operations (Van de Ven, 1986, p. 591). Such matters require an innovation manager to make numerous decisions, which is more precisely defined as the action of making a choice among alternatives in order to solve a problem (Robbins, 1990, p. 108; Simon, 1960 cited in Rue & Byars, 1992, p. 52; Langely et al., 1995, 262). Therefore, it gets evident that decision making is of high importance when problems such as the described challenge and complexity of innovation processes are ascertained (Robbins, 1990, p. 246). Hence, when looking at the challenge of balancing structure and creativity, it gets evident that numerous decisions on the operational level are required in order to deal with this challenge. However, as mentioned before, the decisions innovation managers make are influenced by the organization's structure, as structure determines the way in which decisions are made. Literature has dealt with decisions by defining decisions types, namely programmed decisions and non-programmed decisions (Simon, 1960 cited in: Gibson et al., 1973, p. 573). While programmed decisions are marked as repetitive, they allow for evolving set ways how to deal with problems. In contrast, the non-programmed decisions are described as inexperienced and novel and thus do not provide set standards when addressing problems. (Simon, 1960 cited in Eilon 1992, p. 5)

Although innovation managers’ decisions are essential for innovation processes and thus, the balancing act, literature has not examined the challenge of innovation managers to balance structure and creativity in light of the decision types. Therefore, this thesis aims to answer the following research question:

1.2 Research Question
How does the existing structure in organizations influence decision making of innovation managers when balancing structure and creativity in innovation processes?

1.3 Research Purpose
With our thesis, we aim to gain a deeper understanding of how structure influences the decision making of innovation managers when balancing the contradictory elements of creativity and structure in innovations processes. Therefore, looking at the decisions types will allow us to figure out how structure actually influences the decision making of innovation managers when balancing the contradictory elements of creativity and structure in innovation processes and thus, will enable us to contribute to existing theory on challenges in innovation management. For this, we will pursue the following sub-purposes:
Sub-Purposes:

- To identify the elements of the organization’s existing structure
- To understand how structure influences the decision making of innovation managers regarding structure
- To understand how structure influences the decision making of innovation managers regarding creativity
- To understand how structure and creativity in innovation processes are interlinked

1.4 Delimitation
In order to fulfill the research purpose, the scope of the study has been limited to the perceptions of innovation managers in rather small companies in Sweden, as these allow to investigate innovation managers being in charge for the entire innovation process within in one location.
2 THEORETICAL METHODOLOGY

According to Edmonson and McManus (2007, p. 1155), valuable research is largely dependent on the consistency between the key factors of research, namely the research question and research strategy and design. These factors are crucial for every research project and can differ depending on the research topic (Long et al., 2000, p. 194). Therefore, it is of utmost importance to define aspects which determine these key factors such as preconceptions, philosophical standpoint, research approach as well as the literature selection approach.

2.1 Preconceptions

Research is never value-free. Rather, it is influenced by the preconceptions of the authors, which are induced by the educational and cultural background, previous experiences, personal values, assumptions and interests of the authors (Bryman & Bell, 2011, p. 29). In order to avoid bias in the conduct of the research (Ritchie et al., 2014, pp. 22-23) and in order for the reader to be aware of the factors which had an effect on the conduct of the research and to critically examine the study, it is important for authors to be self-reflective about the preconceptions they have inherent and the role these preconceptions can play in the study (Bryman & Bell, 2011, p. 30).

Both authors are students enrolled in the Management Master program of Umea University. In this programme, the authors studied innovation and management related theories. These studies gave them an insight into relevant topics of the research such as innovation processes, managerial decision making and structures in organizations. The innovation management course, which both authors attended, was especially enlightening regarding these topics and was the major catalyst for the interest of both authors for innovations in general and the managerial balance of creativity and structure in particular. Additionally, during their Master studies, both authors were engaged in consultancy projects with two companies and their innovation projects. Working with these firms and their innovations also increased the awareness for the need for creativity and structure and how crucial managerial actions and decisions are for the success of the innovation. The authors have also realized these aspects through their work experiences. During her Bachelor studies, one of the authors worked for a small company with an innovative business model in the field of e-business where creativity and innovations were a salient part of the business. She experienced the managers’ difficulty to build structural procedures around a creative atmosphere. The other author also experienced the contradiction during an internship. However, she noticed the difficulty the other way round in a rather big company, implying the enhancement of creativity while having fixed structural procedures. Both authors experienced this salient contradiction and the managers’ crucial role in it.

Both authors share the desire to deepen their knowledge about how this salient contradiction is balanced by managers for which structure sets the frame, as they have learnt about the importance of innovations, managerial actions and decisions for organizational survival and growth. Particularly, the authors are interested in getting to know how much scope of freedom managers when being in need to manage the contradiction. Therefore, taking the author’s educational backgrounds and personal experiences with innovation processes into consideration, the authors have the preconceptions that first, innovations are crucial for organizational survival and growth. Second, innovation processes are in need of both, creativity and structure to be in balance.
in order for the innovation to be successful. Third, managers and their decisions and actions are vital for efficient operations and forth, the structure in an organization, whether rigid or flexible, has a remarkable influence on the manager’s work and thus, also on the balancing act. In conclusion, we are aware of these preconceptions we have inherent in consequence of our education and previous experiences and that these preconceptions might be reflected in our thesis leading to a rather one-sided view on the factors influencing innovation managers and the balancing act.

2.2 Research Philosophy

Research philosophy implies the nature of knowledge and how knowledge is developed (Saunders et al., 2009, p. 107). Defining the research philosophy and informing about how researchers view the world is important (Saunders et al., 2009, p. 108), as it guides important choices when conducting the research, such as the appropriate research method, the analysis of data and the type of contribution the research can make (Walliman, 2005, p. 189; Long et al., 2000, p. 190). Hence, the following sections will clarify our philosophical standpoints by describing our ontological and epistemological stances.

Mason (2002, p. 14) states that ontological standpoints are concerned with the very essence of entities of the social world. We believe that innovation processes are not objective entities. Rather, we think that they are constructed by social actors. More precisely, we see the innovation process and the elements of creativity and structure as being continuously shaped and produced by the interactions of social actors such as employees, innovation managers and even customers. We regard the manager as the primary determinant of the balancing act in innovation processes, as the manager is the one being directly responsible for the process. This point of view is in line with a constructivist position. The ontological standpoint of constructivism holds that “social phenomena are created from the perceptions and consequent actions of social actors” (Saunders et al., 2009, p. 111). Consequently, the reality, which is a projection of human imagination, is being constantly revised by social interactions of actors (Long et al., 2000, p. 190; Bryman & Bell, 2011, p. 20).

The ontological standpoint about social reality sets the frame for what can be regarded as legitimate knowledge, respectively the epistemological stance (Williams & May, 1996 cited in Walliman, 2005, p. 188). Epistemology implies the question of what knowledge is acceptable and whether or not social phenomena can be investigated as per the same rules and methods as the natural sciences (Bryman & Bell, 2011, p. 15). We believe that there is not one value-free truth. In order to understand social phenomena, it is important to look at the actors involved as they are the ones construing social reality (Walliman, 2005, p. 205). The balancing act between creativity and structure is influenced by the interpretations and meanings innovation managers give to the situation. Hence, innovation processes and decisions are highly dependent on the innovation manager and his personal view. We believe it is essential to focus on the innovation manager, as he is the one most involved in the entire innovation process. Therefore, the innovation manager is the most suitable person for our research as his perceptions are the ones which shed light best on how structure influences decision making. However, his personal view in turn is also affected by the work setting and the interactions with other social actors, such as employees and customers. Therefore, in line with an interpretivist view, we believe that it is important to capture the subjective meaning of social phenomena, as people and the entities in the natural sciences are not the same (Bryman & Bell, 2011, p. 17).
2.3 Research Approach

After having defined the research philosophy which will guide the further research, it is important to also define the research approach. The research approach indicates how research and theory relate to each other and what role theory has in the research (Bryman & Bell, 2011, p. 11; Edmonson & McManus, 2007, p. 1166). Our aim is to gain a deeper understanding of how structure influences managerial decision making when balancing creativity and structure. Due to our philosophical standpoints just described, we do not believe that formulating and testing a hypothesis will allow us to focus on the innovation manager’s subjective view on the balancing act, as it would imply an already existing theoretical basis that we want to test. Rather, by posing questions, we want to give the interviewee the space to express his own perceptions in order for us to be able to grasp the nature and elements of how the balancing act is managed. Although we are referring to already existing relevant theories about the topic, our theoretical framework is meant to serve as a starting point for further investigations and the development of theory. Collected data will then help us to examine the problem of the balancing act more deeply and to finally draw conclusions.

This is in line with an inductive approach, which implies the generation of theory through the collection of data (Edmonson & McManus, 2007, p. 1166; Bryman & Bell, 2011, p. 13), the inductive approach therefore serves the aim to gain a deeper understanding of the meanings people, in our case innovation managers, give to certain situations. It also allows to shift the research focus while conducting the research. (Saunders et al., 2009, p. 127) However, when looking at research approaches, Bryman and Bell (2011, p. 13) point out that inductivism has certain deductive characteristics and deductivism has certain inductive characteristics. As a consequence, it is not correct to define a study as being only inductive or deductive. Nevertheless, our aim to develop the theoretical base on the balancing act by focusing on the managers perceptions of it, implies a mainly inductive approach which also serves our epistemological stance of interpretivism.

2.4 Literature Selection Approach

2.4.1 Choice of Theory

After having clarified the role of theory in our research, it is next important to clarify what and how theories have been chosen to build up the theoretical framework. The theories, which are essential for the investigation are theories dealing with creativity and structure in innovation processes. Therefore, theories dealing with the enhancement of creativity and structural procedures needed to be included. As we are investigating creativity in organizations, we aimed to include theories particularly dealing with creativity in work settings, as creative enhancement in other settings can require different actions. When deciding on theoretical bases for structural procedures, we aimed for a framework, which provides a profound definition of this rather ambiguous aspect of organizations.

Due to our philosophical stance described before, we think that this balancing act is constructed and shaped by the innovation manager, who can be therefore seen as a main actor when looking upon the elements of creativity and structure as being a challenge. Therefore, we see a necessity in considering theories which shed light on the innovation manager and his work. Consequently, theories on challenges in innovation management are included as these will allow an insight on how managers cope with difficulties in innovation processes. As we are interested in the daily work of the manager when dealing with creativity and structure, we excluded theories on innovation leadership, as the
concept of leadership does rather imply strategic and behavioral aspects, rather than the actions in the day to day business on which we are focusing. Moreover, we seek to investigate the innovation manager in terms of his role and actions rather than on his behavior or personality. Therefore, theories dealing with the innovation manager as a person per se, such as management styles, behavior, skills, characteristics etc. are also excluded. It is also important to include theories on decisions, as this sheds light on how managers deal with the balancing act. As mentioned, we do not aim to focus on the innovation manager as a person, but rather on his position and function. Therefore, we looking at theories on decision making, we excluded individual decision making techniques, cognitive or personal biases, decision styles and other decision theories focusing on the individual as a decision maker. As we are particularly interested in the effect structure on decision making, we included decision types as these shed light on the scope of actions the structure is allowing the innovation manager.

In order to identify relevant articles systematically, we defined search words for each topic that can be entered into the databases, as suggested by Bryman and Bell (2011, p. 108). Regarding topics around innovation, we searched for the word “innovation” independently and “innovation” paired with “process”, “creativity”, “structure”, “challenge” and “management”. When searching for theories around structure, we used the words “structure”, “routines”, “standard operating procedures” and “organizational behaviour” and for the decision aspects, we used the terms “managerial decision making”, “decision types” “programmed decisions” and “non-programmed decisions”. These keywords were partly set in the beginning of the search and partly added after the initial search. The literature was mainly acquired from books and academic articles. EBSCO HOST, Emerald Insight, Wiley Online Library and ScienceDirect as well as the electronic library of Umeå University were used as databases to search for keywords due to their scope and access to key journals in management and business. When searching for articles, the abstracts were read and introductions and conclusions were skimmed in order to evaluate the relevance of the article. According to Hart (1998, p. 53), this procedure is the most effective in order to become familiar with the topic and recognize relevant information. If the main focus was not one of the research topics, articles were excluded. Additionally, we scrutinized the reference lists of the included articles, which also constantly helped us in finding not only relevant articles but also additional keywords to the ones set at the beginning of the search.

2.4.2 Source Criticism

In order to find literature dealing with relevant theories and built the foundation for the research, it is important to critically evaluate the literature (Hart, 1998, p. 13; O'Leary, 2004, p. 73). Critical evaluation does not only refer to the relevance of the literature for the research (Silverman & Marvasti, 2008, p. 369), but also to the quality of literature (O'Leary, 2004, p. 73). Therefore, when searching for articles, we aimed to use only peer-reviewed articles in order to ensure the credibility of the literature, as suggested by O’Leary (2004, p. 73) and increase the reliability of our research. However, we acknowledged that some of the sources, which appeared to be relevant for the study, were not peer-reviewed, as they were published in journals such as in the Harvard Business Review. Nevertheless, we do not expect the effect to be strong, as we mainly focused on peer-reviewed and established journals, such as The Academy of Management Review, California Management Review, Organization Science, Human Relations, Technovation, The Leadership Quaterly and Applied Psychology. Although our aim was to refer to most recent literature for all research topics, the state of theory of some topics was well-established and had long time frames. In order to build a solid and well-founded
theoretical frame of reference, throughout the main research topics we have decided to put an emphasis on sources such as van de Ven (1999), Amabile (1997) and (1998) and Cyert and March (1994). Although these sources have a long time frame, all of the authors are regarded as pioneers in our research topics as they have revolutionized the view on them. Therefore, we believe that despite the long time frame, these sources provide a relevant and reliable basis for our further research. Nevertheless, more recent literature was also included in order to complement the theoretical basis for all topics and provide a thorough overview on the state of theoretical knowledge, as suggested by Walliman (2005, p. 77) and Hart (1998, p. 219). Another well-known pioneer in our research topic with a long time frame is Simon (1958, 1960, 1977), who made vital contributions to the literature of decision-making. Due to his revolutionary contribution, we also saw this source of essential importance for a solid theoretical framework. However, we had difficulties in finding the original sources and had to refer to secondary sources. Usually, secondary sources are seen as of rather less value due to errors which can be passed on (Walliman, 2005, p. 243). However, we tried to avoid these errors by including several secondary sources and critically comparing the similarity of their interpretations. Moreover, we also referred to additional sources also dealing with decision making and types.
3 THEORETICAL FRAMEWORK

3.1 Innovations

3.1.1 Innovations in Organizations

When focusing on innovations in organizations, it gets evident that initiating and sustaining innovations offer numerous opportunities but also risks for companies. In the first place innovations deliver possibilities allowing organizations to survive and grow (Tidd & Bessant, 2014, p. 9) and second, they provide organizations with a competitive advantage (Beckman & Berry, 2007, p. 25). More precisely, innovations can provide an organization with a first mover advantage, which benefits them with greater experience, scale benefits and an early access to scarce resources. In addition to such benefits, which are primarily related to financial advantages, organizations generating innovations can build up a fundamental reputation and capture customers at an early stage. As a result organizations are enabled to build up a sturdy position before their followers can do. (Johnson et al., 2014, p. 308) Therefore, Oke (2001, p. 272) summarizes the importance of innovations by stating the perception many authors have on innovations as “[…] a key competitive weapon for organizations in today’s market environment”. However, even if it gets evident that innovations are crucial for an organization, it is also the innovations nature to hold risks (Carcia-Granero et al., 2015, p. 1094). Innovations are risky, as companies have to manage uncertainties being caused by unknown variables anchored in the innovations’ complexity and the exploration of new fields where the success is dependent on its user’s commitment (Pavitt, 2005, p. 101).

Schumpeter, who can be understood as the founder of the notion innovation, introduced this term to the literature. Schumpeter described innovation as some novelty which can result from existing structures and procedures (Schumpeter & Swedberg, 1991, p. 412; Schumpeter, 1934 cited in Te Velde, 2004, pp. 110-112). Furthermore, Kanter (1983, cited in Georgsdottir et al., 2003, p. 180) also proposed a definition, stating that innovation can be understood “as the generation, acceptance and implementation of new ideas, processes, products or services.” Innovation is furthermore perceived as the endeavor of an organization with the aim to renew a way of production or to renew a product itself (Gassmann & von Zedtwitz, 2003, p. 702). However, literature does not agree on one specific definition of innovation, a common understanding can rather be shown by the conceptual delimitation of innovation to invention. Hence, the outset of an innovation is presented by an invention simply described as an idea or concept, which is transformed into an innovation when the idea or concept successfully delivers value to its users (Tidd et al., 2001, p. 37-38; Şimşit, Vayvay & Öztürk, 2014, p. 691). This value can be delivered through new products. However, organizations generating innovations can furthermore address services, processes and positions as innovation objectives (Tidd & Bessant, 2014, p. 24). Authors distinguish innovation objects in terms of their pace as incremental or radical. The former evolve incrementally and are based on the current structure or product of an organization. Hereby, the emphasis is on exploitation and drawing up on the already settled resources. (Tidd & Bessant, 2014, p. 120) However, Tidd & Bessant (2014, p. 120) point out that a radical innovation, also referred to as breakthrough, can create such a starting point that enables this iteration. An additional key dimension can be seen considering by whom impetus is provided to innovations. Hence, literature separate sources of innovations namely market pull and technology push (Johnson et al., 2014, pp. 296-297). While market pull represent inspiration caused through customers, technology push is the generation of innovations based on
organization's own inspirations. However, in sum an innovation can be seen as the result of organizational endeavor occurring in different forms.

Another common meaning is shown by authors in innovation literature highlighting similar patterns when understanding innovation as a process, which has different steps inherent (Green et al., 2000; Pavitt, 2005, Salerno et al., 2015; Trott, 2012). Irrespective of a specific definition, innovations can take place in the public or private sector, in already existing businesses or new businesses as such of startups (Drucker, 1991, p. 9). In light of this thesis, we focus on product innovations and we want to emphasize the latter definition and imply innovation as a process which takes place over time in the setting of an established, private organization with existing business and includes different stages throughout the process. Thus, our examination excludes young settings like start-ups as well as organizations that are of public/governmental nature.

3.1.2 Innovation as a Process

Van de Ven (1999, p. 21) describes the innovation process as a journey that has an emphasis on the two factors detection and creation. Furthermore, he states that this journey marked by ambiguity can be undertaken along many tracks (Van de Ven, 1999, pp. 21-22) for which then the management is responsible. In line with the statement of many existing tracks, researchers present different ways to look at stages of innovation processes. Slappendel (1996, pp. 107-108) suggests to subdivide the process into five phases, namely design, development, adoption, implementation and diffusion. In contrast, Gassmann and von Zedtwitz (2003, p.702) simplify the innovation process as consisting of two stages where the first stage highlights creativity and effectiveness and where the second stage is concerned with an efficient implementation. A general understanding of the process is provided by focus on its main actions without bringing out specific stages (Tidd et al. 2001, p. 39). Thus, the main elements of innovation processes include the observation of the environment in order to recognize potentials and threats in relation of change. Based on the observation it is necessary to decide if and towards which aspects actions should be undertaken. Next, resources are needed in order to undertake actions and to finalize by the implementation of an innovation. (Tidd et al. 2001, p. 39)

In this thesis we will pursue a compressed concept, following the division of an innovation process undertaken by Van de Ven (1999, p. 23-24). His assumption of the process holds a distinction between three phases which they name (1) Initiation, (2) Developmental and (3) Implementation/Termination Period. Since innovation processes can differ in dependence of their context (Salerno et al., 2015, p. 62; Pavitt, 2005, p. 87), we think that the following division of three main periods provides a broad foundation and enables the application of many different innovation processes throughout our investigation.

(1) The Initiation Period holds the generation of an innovation, which is not only the result of one specific moment, but is commonly an ongoing creation allowing incubating ideas, a period that can last for years (Angle & Van de Ven, 1989, pp. 665-698). This period can also be based on rather random occurrences demonstrating the need for innovations. The ideas and endeavors to generate innovations can be driven by internal or external origins of organizations. First plans are made in order to secure the necessary resources for the following development. Such plans aim for strengthening the ambitions for realization and development and less for a proper review of scenarios. (Van de Ven, 1999, p. 23)
(2) At the outset of the Developmental Period the ideas of the previous period lead to specific actions. These actions allow giving rise to more ideas and to yield different ways in which the evolution of the innovation can take place, thereby the different ways can be parallel, separated and independent or they can flow together. As a result of many ideas and thus ways appearing, the complexity of the innovation process increases. (Schroeder et al., 1989, cited in Van de Ven, 1999, p. 34) Also, plans can fail or unpredictable circumstances throughout the development can change and thus this can cause another basis for innovations and affect timelines (Van de Ven, 1999, pp. 23-24).

(3) Carrying out innovations as well as adopting them to specific company’s requirements are actions of the Implementation/Termination phase. Taken for granted that the development takes place in-house, then the implementation holds the launch of the innovation to the market, consigning it to production sites or distributing it to potential users/customers. It has to be noted that some actions meant to be happening in this period, can already be part of the Developmental Period as some innovations can be built upon organizational formations. (Van de Ven, 1999, p. 53) Innovations can be understood as completed if they are carried out as described above or if no more resources are available for allocation (Van de Ven, 1999, p. 58).

Additional to this, Gassmann and von Zedtwitz (2003, p. 702) point out that “An innovation process is a cumulative sequence of defined stages and activities leading to an innovation.” Hence, this statement implies that innovation processes can be linear processes (Gassman & von Zedtwitz, 2003). However, the innovation process rarely takes place in a linear way since it is a complex matter characterized by uncertainties (Green et al., 2000; Gassmann & von Zedtwitz, 2003, p. 703). No doubts exist that innovation processes can look very different in dependence of contextual varying aspects as for instance the character of the innovation, the companies’ technologies and ecosystems, the geographical location as well as the target-group (Salerno et al., 2015, p. 62; Pavitt, 2005, p. 87). Nevertheless, in this thesis we will concentrate on the linear assumption of innovation processes as we are seeking for a solid foundation for the analysis of our investigation.

3.1.3 Innovation Management

Although the innovation process has uncertainties and varying degrees of tasks inherent, numerous companies succeed in innovations, which is due to the fact that such organizations find ways to respond and manage these circumstances (Tidd et al., 2001, p. 45). Trott (2012, p. 28) states that there is a need for the management of innovations due to the complexity and the existence of numerous actions that require guidance within innovation processes. Management of the innovation process calls for decisions to be made which address resources and their arrangement as well as organization. More precisely, the generation of innovations can be understood as a successful management of employees, financials, equipment and knowledge in the innovation process. (Tidd et al., 2001, p. 45) Brophey et al. (2013, p. 1) even state that the innovation process is the product of the accumulated decisions made by managers. Hence, when examining innovation as a process, it necessary to see them as a management process. This responsibility is undertaken by innovation managers, who are constantly concerned with numerous decisions throughout the entire innovation process and can be seen as a key determinant of the innovation processes.
3.2 Structure as an Element of Innovations

As described above, innovations are processes which start with an initial idea and include a launch at the end (Tidd & Bessant, 2014, p. 83). Even though the output of innovation processes can differ, all innovation processes are based on two main elements: creativity and structure (Trott, 2012, p. 84; Freeman & Engel, 2007, 96). Both aspects are crucial for the successful development of innovations and have been subject to extensive research.

3.2.1 Definition of Structure and its Importance for Innovations

Structures or routines give steadiness to the organization and an orientation for daily tasks (Cyert & March, 1994, p. 122). Structures also reduce the variance of time and quality of task execution as techniques and functions are learned and improved through repetition (March, 1991, p. 83). Consequently, standardized operations enhance the efficiency and accuracy within organizations and thus, the overall organizational performance (March, 1991, p. 83). However, research has also acknowledged the negative effects of structures. Standardized routines can hamper organizational performance by causing a lack of awareness for opportunities, rigidity (Weiss & Ilgen, 1985, p. 57) or thoughtless actions (Ashforth & Fried, 1988, p. 322). But apart from the possible negative effects, structures are important for steadiness and efficiency of organizations (Cyert & March, 1994, p. 120).

Structure implies the mechanisms and procedures which guide organizations in their daily operations (Rue & Byars, 1992, p. 248). Research also refers to structure as organizational routines (Feldman & Pentland, 2003) or standard operating procedures (SOPs) (Cyert & March, 1994, p. 122). In order to examine structure more precisely, we will focus on the definition of standard operating procedures introduced by Cyert and March (1994), which is a widely used and accepted definition of structure in organizations in the literature (Cohen & Bacdayan, 1994, pp. 555-556; Feldman & Pentland, 2003, p. 94; Feldman, 2000, p. 611), as it provides a detailed and systematic view on what structure within an organization consists of.

These structural procedures and their importance also apply to innovation processes. As described before, innovation processes include different aspects such as the planning and execution of innovations. Although creative ideas are the basis for all innovations, no innovation could be created and launched successfully without an efficient structure (Tidd et al., 2002, p. 318). Only focusing on inventions and creativity would enhance new ideas of organizations significantly, but would probably not lead to a successful business (Bessant, 2003, p. 771). Basic routines within innovation processes ensure and support a quick and efficient development of the innovative idea and thus, contribute to the competitiveness of the organization (Trott, 2012, p. 84). Hence, apart from enhancing creativity, innovation processes also need to keep structure and routines in order to ensure an effective and quick performance.

3.2.2 Structure in Work Settings

Cyert and March (1994, p. 120) argue that the structure in an organization depends on four major categories of procedures (standard operating procedures), namely task performance rules, continuing record and reports, information-handling rules as well as plans.
(1) Task performance rules refer to the everyday tasks within the organization and their accomplishment (Cyert & March, 1994, p. 122). These rules provide a guideline for employees by specifying the way in which tasks are executed. In doing so, the task performance rules add to the purpose of standard operating procedures of reducing uncertainty of future events (Cyert & March, 1994, p. 121). These rules usually evolve through prior employees having dealt with the same problem. Hence, task performance rules do not only pass past experiences and solutions along, but also make employee behavior and outcome predictable to a certain extent (Cyert & March, 1994, p. 124).

(2) Continuing reports and records imply the records about important and effective aspects of the organizational operations which are kept by every organization (Cyert & March, 1994, p. 122). These records give information about the organization's perception of its own structure and which aspects of the business require special focus for control and forecasts. The effect of control is evoked especially in the short term as reports induce the checking of important aspects such as financial statements or the like on a regular basis. (Cyert & March, 1994, p. 125) Records also help organizations when generating forecasts and estimating changes in the environment (Cyert & March, 1994, p. 126).

(3) Information-handling rules refer to the transmission of information within the firm. For organizations it is crucial that relevant and important information reaches the right place and person. (Cyert & March, 1994, p. 123) In small companies, information can be shared with all employees due to the small size. In large firms however, the information flow is rather formal. Such organizations have particular units which are responsible for securing special types of information, such as sales departments dealing with market demand information or financial departments providing information about the economic situation. (Cyert & March, 1994, pp. 127-128) Here, information is largely communicated based on the different hierarchical levels within the organization in order to address the specific tasks more accurately and efficiently by handling information in the place in which it is needed (Cyert & March, 1994, p. 129).

(4) Plans are also a major procedure in organizations which are mainly developed in order to allocate the resources between the different organizational operations (Cyert & March, 1994, p. 123). An example for this is a budgeting plan, which sets the feasibility of activities and serves as a mean to control the implementation of these activities. Like the other procedures, planning intends to simplify the organizational activities by providing a guideline. (Cyert & March, 1994, pp. 131-132)

3.3 Creativity as an Element of Innovations

3.3.1 Definition of Creativity

Although several different definitions about creativity and its organizational importance exist, authors (e. g. Woodman et al., 1993, p. 293; Wadden, 2011, p. 70; Bledow et al., 2009, p. 313; Rosing et al., 2011, p. 956) largely agree on the definition of Amabile (1997, p. 40), who states that: “creativity is simply the production of novel, appropriate ideas in any realm of human activity [...]. The ideas must be novel—different from what's been done before—but they can't be simply bizarre; they must be appropriate to the problem or opportunity presented.” Hence, creativity is not only about generating new ideas, but these new ideas need to create value by addressing a certain problem or opportunity. Creativity in general is defined as a cognitive process of individuals (Anderson & King, 1993 cited in Rank et al., 2004, p. 520). However, individual creativity does not only
depend on the individual itself, but also on external aspects (MacKinnon, 1962, p. 458).
More precisely, although creativity partly depends on the personality of a person, it also
depends on the social environment of the individual (Amabile, 1997, p. 40). Amabile
(1997, p. 42) argues that creativity is dependent on three factors, namely intrinsic task
motivation, expertise and creative-thinking skill. The former implies an internal
motivation towards the work, whereas expertise includes a person’s knowledge which is
the base for all creative ideas (Amabile, 1997, pp. 42-43). The latter builds on expertise
and refers to an exploratory and curious working and cognitive style (Amabile, 1997, pp.
42-43). These factors require a substantial degree of autonomy and flexibility in order for
the creativity to be fully unfolded (Amabile, 1997, p. 50).

Looking at the factors which stimulate creativity is especially valuable for organizations
engaged in innovations as it is essential for the development of novel and useful products,
services, processes or business models (Woodman et al., 1993, p. 293). Given the
importance for organizations to stay competitive within the changing environment,
innovations constitute an essential way of meeting or creating new demands and hereby
grow (Tidd & Bessant, 2014, p. 7). Hence, creativity is crucial for organizations and their
innovations.

Creativity and innovation have been subject to extensive research. The definitions of both
terms are very similar to each other, as creativity implies the generation of new ideas
addressing a valuable purpose (Amabile, 1997, p. 40) and innovation implies creation of
value through novel ideas (Şimşit, Vayvay & Öztürk, 2014, p. 691). Due to the similarity
of both definitions, the understanding and utilization of the terms creativity and
innovations and their relation are closely related. Rank et al. (2004, p. 520) see creativity
as the generation of new ideas and innovation as the production and implementation of
these ideas. Although being seen as interrelated, these authors see the innovation process
as starting after the creative process. Other authors have a similar view, also arguing that
creativity always comes first (Amabile, 1996 cited in Taylor & Greve, 2006, p. 724; West,
2002b, p. 412). Nevertheless, these authors view creativity as the first phase and thus, as
a part of the overall innovation process (West, 2002a, p. 357). In contrast, it is argued that
creativity is not limited to the idea generation phase only, but does also occur cyclical
during the entire innovation process (Paulus, 2002, p. 395). In line with Paulus (2002),
we believe that, although creativity is likely to be most salient in the idea generation
phase, creativity is not limited to a certain stage in the innovation process. The reason for
this lies in the fact that innovation processes can imply reiterative steps (King, 1992, p.
99). Hence, creativity is always needed throughout the whole innovation process, as
problems might arise at a later stage requiring new or better solutions.

3.3.2 Creativity in Work Settings
When considering the importance of creativity for innovations, it is essential for
organizations to create work settings which enhance creative thinking. The company's
effort to be productive, to regulate and to unite different organizational parts can hinder
or destroy creativity in firms when they are not aware of it and miss to undertake such
actions that support creativity in a business setting (Amabile, 1998, p. 77). However,
creativity can also be conscientiously boosted (Amabile, 1998, p. 80). Therefore, this part
concentrates on such actions which facilitate creativity. For that we refer to Amabile
(1998) as a pioneer in the field of business creativity, who developed a set with six
specific categories of managerial implications providing clear instructions aiming to
facilitate creativity in organizations. The six categories, which will be explained in the
following more precisely, are named challenge, freedom, resources, work-group features, supervisory encouragement and organizational support (Amabile, 1998, p.80).

(1) Challenge describes the challenge for managers to assign tasks to their employees that suits them best when considering their knowledge and capability in creative thinking. This requires the manager to know his team and more detailed the individual team members as well as the aspects of tasks. The success of this category is moreover dependent on a balanced extent, thus the employee should be slightly challenged without being overtaxed. (Amabile, 1998, p. 81)

(2) Freedom is mainly about providing work force with autonomy. Here, the manager should equip the employees with the objectives and the next responsibility, how to carry out the task should not be specified. In this context, to transport a clear message regarding the objectives is important as well as that these objectives are fixed for a significant period as a highly volatile goal can be seen as an obstacle for creativity. (Amabile, 1998, pp. 81-82)

(3) Resources, namely time and money, are compellingly needed, however, they are also scarce and therefore force managers to consciously allocate them. Creativity is connected to both resources in that sense, that the allocation of these resources can have an impact on creativity. In circumstances where time is crucial for success, time pressure can push some employees’ creativity, especially those employees seeking for challenges. (Amabile, 1998, p. 82)

(4) Work-group features are aiming to utilize group dynamics which generate creative suggestions. In order to reach that effect it is important to mix the groups in a way, which enables a constellation of team members with different backgrounds. By this, various knowledge and working styles are combined which can lead to mutual synergies resulting in new, creative ideas. However, it is also important to consider that the team should carry out a supportive attitude towards the joint objectives, show readiness to help each other, and team members should realize the value of other members’ contribution when working together. (Amabile, 1998, pp. 82-83)

(5) Supervisory encouragement is based on the fact, that creativity causes not only prosperous results, but can also result in less prosperous endeavor. In order to enhance creativity however, it is highly significant to show appreciation for any creative commitment and thus to express importance of an individual’s work contribution. Managers can also support creativity by short-term response towards the contribution made and therefore by providing such organizational structures enabling quick assessment, even when requiring feedback across different hierarchies within the organization. Additionally, managers can take advantage of their position when set a good example with their own attitudes and actions. (Amabile, 1998, pp. 83-84)

(6) Similar to the former category, which is based on the individual level, organizational support means that also the organization in sum can support the enhancement of creativity. When setting another good example from this higher level, companies can clearly motivate employees to be creative. (Amabile, 1998, p. 84) More precisely, one way to stimulate employees to be creative, can be the encouragement of the company culture emphasizing information exchange or the presentation of rewards on a regular base, which shows honor and gratitude for contributions made. However, it is not recommended to provide financial reward since money in this context rather causes
negative emotions of employees which could be the perception of being exploited by the employer. (Amabile, 1998, p. 84) To sum up, with the implementation of these clear recommendations into an executive level, managers can succeed in enhancing the creativity in their work settings.

The third category resources will not be subject to the further examination of this thesis as we think that this category is only salient to specific industries, such as the pharma industry as this industry is dealing with very specific motivations like fighting aids where pressure is helpful (Amabile, 1998, p. 82).

3.4 Structure & Creativity as a Challenge

3.4.1 The Contradiction of Creativity and Structure in Innovation Processes

When looking at creativity and structure with the purpose of generating innovations, it gets evident that both elements are essential, yet have opposing features (Trott, 2012, p. 84). Creativity requires freedom and autonomy. Creative people need room to think, to try out new things and exchange ideas (Trott, 2012, p. 96). Therefore, innovation processes should allow people to exploit their creativity by minimizing impedimental bureaucracy and stiff structures in order to facilitate communication and knowledge and idea sharing (Tidd & Bessant, 2014, p. 86). On the contrary, too loose processes without clear execution tasks and procedures can result in an uncoordinated and inefficient way of working and thereby limit or even hinder the success of an innovation (Tidd & Bessant, 2014, p. 86). But fostering creativity usually de-emphasizes structures and reinforcing structure usually limits creativity (Freeman & Engel, 2007, p. 95). In order to create innovations, the balance between these both elements is essential. This contradiction constitutes a great challenge for innovation managers as they are forced to manage both elements simultaneously.

3.4.2 Idiosyncrasy of Structure

When looking at this contradiction and how managers deal with it, it is important to note that structure can be seen from two perspectives. The one described above, stating that standard operating procedures give a guideline for work by clarifying tasks and responsibilities and ensuring control and an efficient information flow, highlights the importance of standard operating procedures in innovation processes. The other one however, implies the impact of the organizational standard operating procedures on the innovation manager and his work. As Cyert and March (1994, p. 122) state, standard operating procedures affect and also impose the decisions and processes in organizations. Consequently, structure largely dictates how processes in organizations are managed. Therefore, when looking at how managers balance creativity and structure, it is crucial to see the element of structure from these two perspectives. The impact of standard operating procedures will therefore be dealt with in the following when looking at managerial decision making.

3.5 Challenges in Innovation Management

As described before, the balancing act of creativity and structure is a continuous challenge throughout the entire innovation process. Even though the salience of creativity and structure might differ along the innovation process, it is still evident that overall, both elements are necessary for all steps of the process. As both elements are simultaneously present during the entire innovation process and thus require management, the focus lies on the daily operations and tasks of an innovation manager. The simultaneous
management of creativity and structure constitutes a great challenge to innovation managers.

Literature dealing with innovation management has examined several such challenges of contradictory demands, investigating them as paradoxes (Hunter et al., 2011; Lewis et al., 2014; Smith & Lewis, 2011; Taylor-Bianco & Schermerhorn, 2006), dilemmas (Benner & Tushman, 2003) or in light of behavioral complexity (Denison et al., 1995). These challenges of innovation management are largely rooted in the fact that managers of innovation processes are often forced to deal with two-sided, sometimes opposing goals (Bledow et al. 2009, p. 306; Hunter et al., 2011, p. 54).

Research on the management of innovations and its challenges largely refer to it as leadership of innovations (Mumford et al., 2002; Bessant, 2003; Jansen et al., 2009; Hunter et al., 2011; Rosing et al., 2011; Geer-Frazier, 2014). Generally, the term leadership implies the focus on long-term goals and the development of strategies and visions (Rue & Byars, 1992, p. 379). Therefore, leadership typically refers to the strategic level of an organization, whereas management typically refers to the operational level, implying the responsibility for daily operations and tasks (Rue & Byars, 1992, p. 379). Authors such as Andriopoulos and Lewis (2009; 2010), Tushman and O’Reilly (1996) and Gibson and Birkinshaw (2004) have examined this contradiction on a strategic level where leaders face the innovation challenge as a strategic issue. They have to exploit the organization’s existing capabilities by being efficient and structured in their daily business and explore new possibilities and meet environmental changes by being creative (Andriopoulos & Lewis, 2009, p. 696). This is important as both, exploitation and exploration, are essential for ensuring the long term success of an organization (March, 1991, p. 71; Tushman & O’Reilly, 1996, p. 8, 11; Raisch & Birkinshaw, 2008, p. 375). The authors highlight the organizational need for ambidexterity, suggesting to separate explorative and exploitative activities in distinct departments. This contradiction therefore does not necessarily imply the leader to simultaneously manage the contradiction and thus, is not subject to further examination.

Although the term leadership generally refers to the management of strategic issues within an organization, some authors still use the term leader when referring to the daily tasks in the innovation process (Shalley & Gilson, 2004; Taylor & Greve, 2006; Hunter et al., 2011). As we are aiming to examine the balancing act between creativity and structure, we are focusing on operational managers having to continuously and simultaneously deal with the contradiction. Hence, we will only consider innovation managers and thus refer only to innovation leadership on an operational level in innovating companies.

The balancing act of the elements implies a great variety of decisions need to made in order to generate innovations. For this, managers have to evaluate how to enhance creativity and how the right structure looks like and thus, they are in charge of making critical decisions aiming for the right and effective balance between creativity and structure. However, it should also be noted, that the balancing act is not only dependent on the individual manager but also on conditions which are already set by the organization. Therefore, when examining the way creativity and structure are balanced, it is relevant to consider managerial decision making, as this will shed light on to what extent the balancing act can be managed freely by managers and to what extent the work of managers is already determined. For this, the following chapter will consider decision making in organizations and how free decision making in organizations is.
3.6 Decision Making

3.6.1 Definition

Barnard (1938, cited in Langley et al., 1995, p. 260) states that decision making presents one of the most crucial functions of managers, who are acting in the organization’s favor (Rue & Byars, 1992, p. 52). Due to its importance for the success and failure of organizations (Kreitner & Kinicki, 1992, p. 550), literature has examined the field of decision making from many different perspectives, including models (Koopman & Pool, 1991; Langley et al., 1995; Watson, 2006), involved parties (Yukl, 2010), decision approaches (Rue & Byars, 1992) and types (Cray et al., 1994; Perkins & Rao, 1990). Literature (Nutt, 1993; Koopman & Pool, 1991; Clegg et al., 2005) largely refers to decision making as a sequential model (Simon, 1960 cited in Langley et al., 1995, p. 261). This first sufficient contribution to decision making literature was made by Simon (1960, cited in Langley et al. 1995, p. 261) who suggests a distinction of decision making (processes) into the three stages intelligence, design and choice, which occur one after the other (Simon, 1960 cited in Rue & Byars, 1992, p. 52; Langley et al., 1995, p. 263).

1) Intelligence is a step where attentiveness towards the environment enables a derivation and recognition of a problem. Taking the problem up, (2) design is the stage aiming to generate and analyze divers solutions meeting the problem. (3) Choice is the stage where the solution among the alternatives is selected.

In line with the content of Simon's decision making model we define decision making as the undertaking of solving a problem by choosing a solution among alternatives. The problems requiring decisions in this thesis are not only that managers have to make decisions about enhancing creativity and ensuring structure per se, but also about the simultaneous management of both elements. However, as it is not relevant for this thesis to distinguish the different stages, we only refer to the implied definition of Simon to decision making rather than the distinction of different stages.

Therefore, as mentioned before, when examining the balancing act, it is crucial to look at the decisions managers make since decisions are crucial for companies failure and success (Kreitner & Kinicki, 1992, p. 550). However, managers are only able to make decision within the scope the organizational structure provides as Ceyert & March (1994, p. 99) state, the scope of managerial decision making is largely shaped by the standard operating procedures. In order to examine how managers balance the contradiction, it is therefore important to first look on how free they are to manage the balance, and how much the structure within the organization prescribes the way in which it is managed. Therefore, when looking at managerial decision making, we will particularly focus on decision types as these show the extent to which managers are free in their actions and ways of managing the contradiction.

3.6.2 Decision Types

Ensuing, decisions can be distinguished between two types, namely (1) programmed and (2) non-programmed decisions (Simon, 1960 cited in: Gibson et al., 1973, p. 573). Both types differ, however they have in common that they depend on the problem the decision is concerned with.

(1) Programmed decisions are recurrent and routine decisions dealing with structured problems (Ivancevich et al., 1989, p. 98; Gibson et al., 1973, p 572; Perrow, 1967, p. 204), which are repetitive and thus, occur on a regular base (Ivancevich et al., 1989, p. 98). As
a result, organizations gain experiences in making programmed decisions and create norm procedures in order to regularly deal with such decisions (Kreitner & Kinicki, 1992, p. 552). Norm procedures become a part of the organization's structure and thus the manner to make a decision gets more predictable and transparent (Simon, 1958 cited in Cray et al., 1994, p. 192) which as a result facilitates planning (Cray et al., 1994, p. 195) and allows effective ways to make decisions (Ivancevich et al., 1989, p. 99). Simon (1977, cited in Kreitner & Kinicki, 1992, p. 552) provides traditional and modern techniques which facilitate dealing with programmed decisions. The most common traditional techniques are habits and standard operating procedures which can be supported by modern techniques like technologies (Simon, 1977 cited in Kreitner & Kinicki, 1992, p. 552). When looking upon programmed decisions, we focus on the traditional handling and their standard operating procedures, which is defined as representing the organizational structure.

(2) Non-programmed decisions are characterized as unstructured and new and thus do not deliver set methods (like norm procedures) when dealing with unstructured problems (Gibson et al., 1973, p. 574). Problems which are novel and have many uncertainties inherent can be understood as being unstructured (Ivancevich & Matteson, 1990, p. 516). The fact of missing predetermined procedures can be explained by the complexity of the underlying problem or because it did not occur in the same way before (Gibson et al., 1973, p. 574). This type of decision calls for unconventional and creative ways to make decisions when solving problems. Simon (1977, cited in Kreitner & Kinicki, 1992, p. 552) suggests how to handle non-programmed decisions, which require a rather broad way of solving problems. Therefore, the traditional technique in making decisions involves the usage of rule of thumb as a choice and coaching of managers. Furthermore, non-programmed decisions require decisions to make in creative and intuitive manners including also the manager's individual opinion to be brought in in order to tackle unstructured problems (Simon, 1977, cited in Kreitner & Kinicki, 1992, p. 552; Ivancevich & Matteson, 1990, p. 516). Modern techniques intend to emphasize on the training of decision makers as well as to provide technical support (Simon, 1977, cited in Kreitner & Kinicki, 1992, p. 552). Similar to programmed decisions, non-programmed decision within an organization shed light on how structure shapes the managerial scope of actions.

3.7 Summary of the Theoretical Framework

Innovations represent a chance for organizations to grow by achieving competitive advantages and building a good reputation among customers. The generation of innovations mainly follows a process of three stages, namely Initiation, Developmental period and Implementation period. All of these three steps have two elements inherent, which are essential for the successful development of innovations: creativity and structure. Creativity is crucial for the development of new and valuable ideas and requires autonomy and freedom for people to embrace creative thinking. Structure is essential for the quick and efficient development of innovations implying set mechanisms and procedures. The innovation manager in responsibility for operational tasks, manages these contradictory elements throughout the innovation process. The way innovation managers balance this contradiction is influenced by the general structure within the organization. The impact of the general structure on the balancing act of managers can be measured through the decisions the manager is able or willing to make. Therefore, a framework was developed considering the impact of structure on managerial decision making by looking at decision types in the balancing act of creativity and structure. The
decision types are distinguished between programmed and non-programmed decisions. While the former present repetitive ways of handling decisions the latter lacks norm procedures since these decisions deal with complex problems.
4 PRACTICAL METHODOLOGY

4.1 Research Strategy

The choice of research strategy depends on the ontological and epistemological stances of researchers and the research approach (Bryman & Bell, 2011, p. 26; Saunders et al., 2009, p. 141) and has the purpose to provide an orientation for conducting the research (Bryman & Bell, 2011, p. 26). As explained in the chapter on research philosophy, we adopted the ontological stance of constructivism, as we believe that reality is socially constructed by social actors. We also believe that in order to understand social phenomena, it is important to conceive their subjective meaning, implying the epistemological stance of interpretivism.

Therefore, we are focusing on the innovation manager and his own perceptions and opinions about the problem. For the purpose of listening to his perceptions and interpret these, it is necessary to get as close as possible to the innovation manager and the phenomenon of the balancing act. In order to do so, we will pursue a qualitative strategy when conducting the research. This allows us to “see through the eyes” (Walliman, 2005, p. 247) of the innovation manager. A qualitative strategy also enables us to collect a rich extent of material, allowing for interpretations and to grasp the subjective perceptions and thus, gives some indication of the phenomenon (Bryman & Bell, 2011, pp. 410-411). It enables us to gain a deeper understanding of the complexity of the research topic, by involving the entirety of the context of innovation managers rather than reducing the manager to a single and independent variable (Flick, 2006, p. 15; Bryman, 1999, p. 43). A quantitative strategy in contrast, would not allow to consider the subjectivity of the research and to grasp the meanings innovation managers attach to the problem (Long et al, 2000, p. 190). A quantitative strategy would not be suitable in order to answer our research, in order to be able to answer the research question, it is necessary to gain an understanding of numerous aspects which are also interrelated. Thus, only a qualitative research allows us to understand not only individual meanings on topics, but also to connect them to underlying contexts. This is only possible with a qualitative strategy, as it allows for variety, richness, complexity (Mason, 2002, p. 1) and the inclusion of different dimensions (Flick, 2006, p.16). A qualitative strategy can be criticized in terms of the validity as the results are determined by the researchers perception on what is relevant, which is why the results are not generalizable. However, we do not attempt to produce generalizable findings, but mainly to contribute to theory.

In order to examine the research topic, we will apply a cross-sectional design implying several cases at a single point in time (Bryman & Bell, 2011, p. 57). In contrast, pursuing a longitudinal design and following the innovation manager throughout the whole innovation process would have helped us to perceive the change of the structural influence on decision making in the three phases of the innovation process (Bryman & Bell, 2011, p. 57). However, such a longitudinal research design is not possible due to the scope of this research.

4.2 Collection of Empirical Material

4.2.1 Research Method

The research method refers to the technique by which data is collected and can imply different instruments for the purpose of data collection, such as self-completion questionnaires or in-depth interviews (Bryman & Bell, 2011, p. 41; Saunders et al., 2009,
As we aim to gain a deeper understanding of a problem, the research process was open in order to allow changes in the direction when needed. Therefore, we excluded research methods which implied a too structured and predetermined way of data collection, such as structured observations or questionnaires. Rather, a qualitative interviewing approach was regarded as appropriate as it reflects our ontological stance of constructivism and epistemological stance of interpretivism (Mason, 2002, p. 63). It allows the researcher to get an understanding of the interviewee’s perceptions about reality and the social phenomenon at hand by listening and interactively talking to him (Mason, 2002, p. 64). Interactiveness refers to the fact, that the interviewer is not external to the data collection process, but an integrative part of it (Taylor & Bogdan, 1998, p. 88).

An interviewing approach allows us to pursue the clear goal (Taylor & Bogdan, 1998, p. 90) of gaining a deeper understanding of the influence of structure on decision making of innovation managers when balancing structure and creativity. At the same time, interviews also allow to gain additional insights (Taylor & Bogdan, 1998, p. 91), as it is needed to draw a picture of the company since structure is embedded in the company due to its evolvement over time. Moreover, an interviewing approach makes the interviewee reconstruct the social phenomena (Mason, 2002, p. 64). This will provide an indication on what the innovation manager perceives as of primary importance and what not and thus, will serve the purpose to grasp the perceptions and subjective meanings innovation managers attach to happenings.

In order to conduct the interviews, we regard semi-structured interviews as an appropriate method for our research. A semi-structured interview provides us the needed flexibility when collecting material as it allows posing questions in different orders or posing follow-up questions to obtaining richer and deeper answers when needed (Bryman & Bell, 2011, p. 467). However, in the meantime, a semi-structured interview also saves us from being in need to formulate too many follow up questions during the interview, which could be posed in a too leading way when being formulated spontaneously. Nevertheless, as discussed in the section on research approach, it gives us the possibility to use the theoretical framework as a starting point and pathway along the interview. Therefore, it ensures to gather data on the needed topics by providing a guideline for the data collection. (Bryman & Bell, 2011, p. 467)

To sum up, we think that conducting semi-structured interviews is the most appropriate and suitable way to gather data for our research topic, as it provides a guideline for collecting data and a possibility to understand patterns between interviewees while still allowing flexibility in posing questions.

4.2.2 Selection of Interviewees

Company Selection Criteria

The company selection criteria are categories which selected organizations should match. Although we are focusing on innovation managers as the primary unit of analysis, it is still important to make sure that the organization in which the manager is operating fits the following set criteria.

Criterion 1: Innovating Companies with an established product range

The first distinct but essential criterion for organizations eligible for our research are innovations. In order to examine the contradiction between creativity and structure in innovation processes, it is necessary to search for companies which innovate, and thus are forced to deal with this contradiction. For this, the most explicit ones are companies
which produce products. Usually, companies which have a product range are much likely to innovate. Even if these innovations only imply incremental changes to already existing products, it still makes the company innovating. Therefore, in order to keep the probability of innovations within companies high and reduce the failings to contact companies were we are less sure of the innovating aspect, the first criteria for selection were companies which have an established product range and innovate besides.

**Criterion 2: All stages of the innovation process need to be consolidated in one location**
In the theoretical framework, it was pointed out that we look on innovations as processes consisting of three phases (Initiation, Developmental and Implementation period) (Van de Ven, 1999, p. 23-24). We also pointed out that creativity and structure need to be managed simultaneously throughout all these phases. Especially in large companies, innovation processes can be divided by having different departments in different locations. As we aim to examine the balancing act throughout the innovation process, the phases of the innovation process should not dispersed in different locations. Therefore, the second criterion implies the need for companies to accomplish all innovation process phases in one location.

**Criterion 3: Established structure**
As defined in our theoretical framework, structure in terms of standard operating procedures is a slow emerging and steady aspect which gives a guidance for the execution of daily tasks. These procedures do not emerge overnight, but develop over time. In order to examine structure as a part of our research, the companies had to be well-established in order to have an established structure and procedures, which give steadiness to the organization (Cyert & March, 1994, p. 122). Therefore, we excluded young companies, such as startups, as they usually do not have structural procedures which are solidly embedded in the daily operations, as structural procedures only develop over time (Cyert & March, 1994, p. 122). We set an age-limit of ten years for companies to be suitable for our research, in order to ensure that that standard operational procedures are existent.

**Interviewee Selection Criteria**
The interviewee sample criteria are categories in which accordance potential interviewees have been selected. The interviewees are the primary subject of this study and setting the following criteria for their selection is essential in order to reach the appropriate person:

**Criterion 1: English speaking**
Both authors are international students who do not speak the Swedish language. Therefore, all interviewees had to speak the English language. It is also important that interviewees have an adequate level of English, in order for the authors to understand the responses and to be able to process the data in the analysis and conclusion accurately.

**Criterion 2: Manager in charge of the innovation process**
As mentioned in the chapters before, when examining the balancing act, we focus on innovation managers who are in charge for the daily tasks in the innovation process and thus make decisions on a daily basis. Only managers who were responsible for the daily tasks at the operational level and aspects of the innovation process were consequently responsible for the elements of creativity and structure. Besides, only managers who were responsible for all stages of the innovation process were regarded as suitable for the study, as we examine the balancing act alongside the entire process.
Interviewee Selection Approach

As we have predetermined the criteria which the organizations and interviewees should match, we were pursuing a non-probability sampling, where the sample selection depends on the researcher’s subjective judgement about the interviewees and their relevance to the study (Saunders et al., 2009, p. 233). When selecting potential companies and interviewees, we considered two companies which were engaged in consultancy projects as part of a course during our Master program. Both companies met the set company criteria and assuming that both companies are generally willing to participate in student projects, we first contacted these two companies explaining to them the research purpose and making sure that the other sampling criteria are met. Both companies were willing to participate. After this, the search for interviewees was not straightforward, as it was difficult to search for companies which innovate and have the innovation process at one location. However, as we had contacts to cases already, we used these in order to identify further cases. We looked for partners of the two companies, which helped us significantly in identifying further cases and their partners and so on and stopped when the sample was large enough considering the scope of the study. This approach is related to a snowball sampling, which is commonly used in case interviewees are difficult to identify (Saunders et al., 2009, p. 240). A possible negative effect of snowball sampling can be the similarity between the interviewees due to their relatedness, which can lead to a bias caused by a homogenous sample (Saunders et al., 2009, p. 240). On the one side, we tried to minimize this bias by making sure that interviewees are still from different sectors in technology driven industries, such as real estate, entertainment, traffic, communication and workforce management. On the other side, we also asked teachers at Umea University also resulting in companies from different industries.

In order to find companies willing to participate in our research, first we searched for contact details on the company websites. As the innovation managers in companies are not primarily innovation managers, but managers who manage innovations besides the usual business, we did not have a primary position we could have tried to contact. Therefore, we first looked for the contact details of the CEO, as we viewed him as the right person to decide which person within the company would be the appropriate interviewee. We contacted the companies via phone, as phone calls were more straightforward than e-mails, enabling us to explain our research purpose and the interviewee sample criteria and thus, making sure that potential interviewees are the relevant persons for us to conduct interviews with. Due to the straightforwardness, phone calls also allowed us to search in a very effective way for interviewees, as response is received immediately. In case the CEO’s phone number could not be found on the website, we called the general contact number, asking to be forwarded to the CEO.

In sum, we have contacted 18 companies. One of these companies was detected with help of a teacher at Umea University and resulted in one interviewee willing to participate in our research. The remaining 17 companies were found via snowball sampling, out of which nine individuals were willing to participate in an interview with us, resulting in ten interviews in total. Two other potential interviewees rejected the request due to time limitations and two were excluded after the phone call for not meeting the second criteria for companies. The remaining four potential interviewees were not available. One of the potential interviewees was on holiday and not available in the time frame of one week for conducting the interviews. The remaining three potential interviewees were not available despite numerous trying’s due to meetings or customer appointments. Although ten interviews were arranged, seven were ultimately included in the study. Two of the arranged interviews were cancelled short-term by the interviewees. The remaining one
interview was conducted as planned. However, when transcribing the interview and reviewing the material, we realized that the interview did not meet the second criteria for companies and interviewees. Since we informed the interviewee about the criteria in the same way we informed the other interviewees, we assume that there must have been other communicational misunderstandings during the phone call as the summarized information did not appear to be misleading.

Table 1 shows information about the seven conducted interviews, including the interviewees’ position, company size and industry, interview date, method of conduct and interview length. The main criteria was to assure the interviewees are the direct responsible person for the entire innovation process. Depending on the company size, structure or the like, this person can have different positions inherent across the companies, which is why interviewees positions range from CEOs to different departmental managers.

<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Position</th>
<th>No. of employees</th>
<th>Industry</th>
<th>Interview date</th>
<th>Method of conduct</th>
<th>Interview duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviewee 1</td>
<td>CEO</td>
<td>7</td>
<td>Software Technology</td>
<td>05th of May</td>
<td>Face-to-face</td>
<td>73 min</td>
</tr>
<tr>
<td>Interviewee 2</td>
<td>CEO</td>
<td>31</td>
<td>Software Technology</td>
<td>05th of May</td>
<td>Phone</td>
<td>34 min</td>
</tr>
<tr>
<td>Interviewee 3</td>
<td>CEO</td>
<td>10</td>
<td>Hardware &amp; Software Technologies</td>
<td>06th of May</td>
<td>Phone</td>
<td>37 min</td>
</tr>
<tr>
<td>Interviewee 4</td>
<td>COO</td>
<td>18</td>
<td>Niche Industry (anonymous)</td>
<td>06th of May</td>
<td>Face-to-face</td>
<td>79 min</td>
</tr>
<tr>
<td>Interviewee 5</td>
<td>Head of development</td>
<td>29</td>
<td>Software Technology</td>
<td>07th of May</td>
<td>Face-to-face</td>
<td>75 min</td>
</tr>
<tr>
<td>Interviewee 6</td>
<td>Head of R&amp;D</td>
<td>37</td>
<td>Hardware &amp; Software in Technologies</td>
<td>08th of May</td>
<td>Face-to-face</td>
<td>95 min</td>
</tr>
<tr>
<td>Interviewee 7</td>
<td>CEO</td>
<td>60</td>
<td>Software</td>
<td>08th of May</td>
<td>Phone</td>
<td>57 min</td>
</tr>
</tbody>
</table>

Table 1: Interview Information

**4.2.3 Interview Guide**

As mentioned in the chapter about research method, semi-structured interviews will be employed in order to collect data. The interview process will be based on an interview guide, which allows a structured but flexible method for posing questions (see Appendix 1). It also allows us to investigate all and the same topics with all interviewees (Taylor & Bogdan, 1998, p. 106). The guide consists of topics with several questions that are supposed to encourage valuable answers. However, the exact formulation of the questions also depend on the course of the interview. Also dependent on the course of the interview, additional information would be provided in case the interviewee needs clarification, or follow-up or specifying questions will be posed in case the interviewees’ answer needs to be deepened or clarified.
The topics, in which the interview guide is divided, consist of four to six questions, however, as mentioned before, follow-up questions will be added or formulations changed in case it is needed. The questions were developed based on the theoretical framework. Therefore, the interview guideline is divided into five topics: demographic information, innovation management, structure, creativity and decision making.

**Topic 1: Demographic Information**
The first set of questions are on basic demographic information about the interviewee and the company. For this, background information will be collected such as position of the interviewee, company size, date of foundation and number of employees the interviewee is in charge of. Moreover, the aim is to get an understanding in what way the company works with innovations. These questions have the purpose for the authors to be able to see interviewee’s answers in light of the context and to facilitate the beginning of the interview by talking about basic facts (Bryman & Bell, 2011, p, 475).

**Topic 2: Innovation Management**
The second set of questions is supposed to gather information about the innovation process and how the process looks like from the idea generation to the implementation. The aim is also to collect data about how the manager perceives his role and tasks in this process. Particularly, we aim to understand if the manager perceives different challenges in the innovation process compared to general management processes, as this might shed light on the difficulties and contradictions innovation processes have inherent.

**Topic 3: Structure**
The third set of questions aims to gain a deeper understanding about the structures and routines within the company. As mentioned before, the questions have been developed based on the theoretical framework. Therefore, this set of questions aims to gather data about the four standard operational procedures defined by Cyert and March (1994) in order to understand the structure and its rigidity or flexibility.

**Topic 4: Creativity**
The fourth set of questions has the purpose to shed light on the enhancement of creativity within the company. These questions are based on the six categories of creativity enhancement by Amabile (1998). However, the third category of scarce resources was already covered within one question in the category of structure.

**Topic 5: Decision making**
The fifth set of categories aims to gain a deeper understanding on decisions the interviewee makes. The questions are directed towards collecting data about programmed and non-programmed decisions, also in relation to structure and creativity in innovation processes.

As described, every set of questions aimed to collect information on different topics. The questions for these different topics also differed somewhat. Topic 1 and 2 aimed to collect general information on the company and the interviewee himself. Therefore, these topics entailed open questions, which the interviewee can answer based on his own knowledge and own words (Flick, 2006, p. 156; O’Leary, 2004, p. 159). Due to this, we see open questions as advantageous to start the interview with, as they encourage the interviewee (O’Leary, 2004, p. 159) and thus, serve as an icebreaker. Moreover, they generate rich data (O’Leary, 2004, p. 159) and allow us to draw an in-depth picture of the context.
Topic 3, 4 and 5 mainly consist of theory-driven and closed questions (Flick, 2006, p. 156; O’Leary, 2004, p. 159), aiming to obtain answers on theory-related topics. Generally, we tried to formulate the questions in a way that leads the interviewee as little as possible, as suggested by Ritchie et al. (2014, p. 191). In order to do so, we began most of the questions by asking “How”, which gives the interviewee the chance to answer freely. Moreover, we used opposing features in order to neutralize the question (Ritchie et al., 2014, p. 192), such as “How rigid or flexible are the reporting systems?” or “Would additional structures help or hinder you in managing the innovation process?” These questions are of different kinds, such as introductory, open as well as direct and indirect questions.

4.2.4 Interview Procedure

After having arranged eight interviewees with eight interviewees, we have sent each interviewee a confirmation-mail including the set time and date, our contact details as well as an attached document with information on the research purpose and the conduct of the interview (see Appendix 2). Although already explained during the phone call, we sent this document in order for the interviewees to be clearly informed about the research purpose and how their material is going to be used. All interviews were conducted according to the preferences of the interviewee regarding date, time and method of conducting the interview. Depending on the location of the company, the options to conduct the interview were face-to-face or skype or phone calls. With interviewees being located in Umeå, face-to-face interviews were conducted, which were four in total. These interviews were completed in either the interviewee’s office or in a conference room; however the authors did not perceive any distinct impact the different rooms might have had on the atmosphere of the interview completion. The interviewees outside of Umeå all preferred a phone call to a skype call. The face-to-face interviews allowed the authors realize if the interviewees did not fully understand the questions and therefore explain the questions more detailed. Nevertheless, this was also possible to realize during the phone interviews, as interviewees kept silent for a while or asked for a specification of the question. As O’Leary (2004, p. 165) and Walliman (2005, p. 285) mention, phone interviews were advantageous as they allowed us to extent the geographical range and thus, increase the number of potential interviewees. Besides, phone interviews also present a convenient method (O’Leary, 2004, p. 165), allowing us to conduct several interviews in a short period.

All of the interviews followed the interview guide and in all interviews the authors were able to collect data for all five topics. Both authors were present in all interviews and divided the tasks within the interview in order to be more efficient. One author mainly posed the questions according to the interview guide, whereas the other author mainly took notes and kept track the completeness of needed data and posed follow-up questions when needed. According to Ritchie et al. (2014, p. 208), dividing the tasks in such a way increases the effectiveness of the interview, as building a line of questions is easier if only one interviewer is largely posing the questions. Moreover, being interviewed by two persons at once can be confusing for the interviewer (Ritchie et al., 2014, p. 208). Although we have recorded all interviews, taking notes allows to capture contextual information, such as the place, date and time of the interview (Saunders et al., 2009, p. 334). All interviews started with an explanation of the procedural aspects. Here, the interviewees were informed about the task division between the authors, the five themes that will be asked for and the set duration of 30-40 minutes. This gave the interviewees the opportunity to start thinking about the topic in their own way and ensured once more informed consent (Ritchie et al., 2014, p. 187). However, the length of the interviews
varied to a great extent from 34 to 95 min. This could be due to the fact that open questions encouraged the interviewees to give in depth answers (Saunders et al., 2009, p. 337), which we did not want to interrupt. However, none of the interviews had to be interrupted which is why we were still able to cover all topics of the interview guide. After asking for permission, all interviews were recorded with a dictation device in order to be able to transcribe and analyze the data afterwards. One has to be aware that this might create an uncomfortable feeling for the interviewee, making him cautious when answering the questions. In order to avoid this and encourage a free responding on questions, the interviewees were informed about the fact that they will be kept anonymous in the sense that only their position and company industry will be named.

4.2.5 Limitations

The interview procedure indicated some limitations. The first limitation was the language. As both authors are not speaking the Swedish language, all interviews had to be held in English. All interviewees mastered the English language, we still noticed some minor difficulties in the expression of opinions and thoughts. However, we managed to overcome these difficulties in the interview by formulating some questions in more simple words or by posing specifying or follow-up questions in order to make sure we understood the answers correctly. Another limitation was the quality of the recordings of the phone interviews. Although a dictation device was used in order to ensure a high quality of the recordings, the understanding of the phone recordings were cumbersome, which made transcriptions difficult and more time-consuming. However in sum, we managed to overcome the limitations and the biases which could have been caused regarding the study.

4.3 Processing the Empirical Material

After having conducted the interviews, the authors transcribed the interviews by listening to the recordings and manually typing what was said. According to Bryman and Bell (2011, p. 483), the transcription of interviews is very time-consuming. However, despite the time effort, transcriptions are very useful as they allow a very detailed familiarization and review of the material (Ritchie et al., 2014, p. 281). This is not only important for a clear illustration of the material in the empirical chapter, but also helpful for the data analysis. It also prevents the loss or neglect of important data by capturing everything said. Therefore, as suggested by Saunders et al. (2009, p. 485), we made all transcriptions right after the interviews were finished in order to avoid an overload of recordings and when all details were still fresh and the authors were able to recall everything said. Having these transcription as a basis allows to move to the next step of the processing procedure of the empirical material (Flick, 2006, p. 284). In our case, the next step was to review the transcriptions individually and to work out all information related to the sub-purposes of our study, namely the two aspects structure and creativity in order to present the relevant information in the empirical chapter. When working out everything said by the interviewees related to these topics, we have chosen as much representative citations as possible in order to keep the authenticity of the material, as suggested by Ritchie et al. (2014, p. 309) or we summarized the statements in our own words. The research topic holds not only the broader themes of structure and creativity, but in relation to our research question, it can also be very dependent on contextual factors. Therefore, It was necessary to provide the reader additionally with general information about the respective companies and more detailed information on their innovations as well as information on their innovation processes. These contextual information will not only help the reader to
understand the context the interviews were conducted in, but are also highly relevant for the analysis of the material.

Our research question requires us to look on each company individually, in order to detect how the respective structure influences decision making of the interviewee when balancing structure and creativity. Therefore, we presented the relevant material according to the respective interviewee separately in order to present each case in a self-contained way. We aimed to provide a compact but rich presentation of the material, that includes enough detailed information but not too much causing a difficult access to the relevant topics, as noted by Ritchie et al. (2014, p. 309).

4.4 Analyzing the Empirical Material

As mentioned above, in order to examine how structure influences the decision making of interviewees, we first needed to analyze all interviewees and the respective companies individually. This allows us to refer back to the company specific structure and context and subsequently, to compare all cases and detect patterns. This procedure shows similarities to the procedure of a thematic analysis. In a thematic analysis, material is collected based on broadly predefined topics in order for the research to be able to compare different cases and thus, identify patterns (Flick, 2006, p. 307).

4.4.1 Preparing for the Analysis (Interim Step)

In order to prepare the empirical material in a way which allows to work on in the analysis, an interim step between the generated empirics and the presented analysis chapter was necessary. The interim step was used in order to prepare for the analysis by creating a document for each respective company. This document was created by choosing citations of the respective interviewees which appeared to be most salient regarding the following information:

1. Context
2. Demography and Innovations
   - Importance of innovations,
   - Innovation as a process
   - Role of innovation manager
3. SOPs (examination of each SOP)
   - Does the SOP exist?
   - Is the existing SOP handled in a manner that meets either programmed or non-programmed decision making?
4. Creativity actions (examination of each category of Amabile)
   - Do the interviewees have the possibility to pursue the actions?

In order to gain a good overview and bring the information of all interviewees together, we have created two tables with summarized information about the examined SOPs on the one hand and the examined creativity actions of all studied companies on the other hand. These two tables (Table 2 and 3) are also shown in the analysis chapter on pages 58 and 61 as they provide a clear summary and thus, support the understanding.

4.4.2 Writing the Analysis Chapter

After the above described interim step, the prepared documents for each respective company and the tables 2 and 3 served as a foundation for writing the analysis chapter.
Therefore, we will describe below the undertaken processing in the analysis in relation to the specific parts of the analysis chapter.

**Analysis of 6.1 (Importance of Innovations)**
In order to analyze the importance of innovations, first we compared all prepared documents in order to be able to pick the most salient aspects and citations. Second, we compared these with the theoretical framework provided in chapter 3.1.1 Innovation in organizations.

**Analysis of 6.2 (Innovation as a Process and Tasks of the Innovation Managers)**
Similar to the importance of innovation, in order to analyze innovation as a process as well as the tasks of innovation managers, we compared all prepared documents in order to be able to pick the most salient aspects and citations. Thereafter, we compared these with the theoretical framework presented in the chapter 3.1.2 Innovation as a Process and chapter 3.1.3 Innovation Management.

**Analysis of 6.3 (Importance of Structure and Creativity)**
In line with the analysis of 6.1 and 6.2 we proceeded once more in the same way when we first compared all prepared documents in order to pick the most salient aspects and citations. Second, we compared these with the theoretical framework presented in chapter 3.2.1 Definition of Structure and its Importance for Innovations, 3.3.1 Definition of Creativity and chapter 3.4.1 The Contradiction of Creativity and Structure in Innovation Processes.

The undertaken way of analyzing 6.1 - 6.3 enabled us to draw a broader picture of the examined settings. Thereby we were able to see the more specific findings on structure and creativity in light of the context in which innovations are pursued in the examined companies.

**Analysis 6.4 (SOP)**
The SOPs were analyzed one after another, therefore for each SOP we proceeded as follows. First, we brought together the existing procedures in the respective companies and compared these to the theoretical basis of Cyert and March (1994). Second, we analyzed which of the companies are handling the respective SOP in a non-programmed way and third, which companies are handling the SOP in a programmed way. This was analyzed by comparing the existing procedures to the theoretical framework provided in chapter 3.6.2 Decision Types. Lastly, we concluded the analysis of each SOP by showing the influence the SOP has on decision making. This analysis procedure allowed us to identify patterns between the interviewees and to develop further knowledge which is not covered so far by the theoretical framework. As a result and also in light of the findings from sections 6.1 to 6.3, we were able to discover how the structure influences decision making of innovation managers regarding each one of the four SOPs. By putting the individual SOPs together, we could draw conclusions on the overall influence structure has.

**Analysis 6.5 (Creativity)**
In order to analyze the actions pursued for the enhancement of creativity, we have chosen the most salient citations from the prepared documents of the interim step. Next, we compared these statements of the interviewees with the theoretical framework provided in chapter 3.3.2 Creativity in Work Settings. This procedure allowed us to detect how structure influences the decision making regarding creativity.
5 EMPIRICAL FINDINGS

5.1 Interviewee 1

Organization 1 was established in 1995 and constitutes of 8 people including the CEO. Organization 1 takes care of an economic and technical field in a technology intense market, where constant development is required in order to keep up. Interviewee 1 states that “In our segment, innovations are very important and also the whole society is changing I would say and the IT and that is something we have to follow up. I must say that within the last 5-10 years this has been increasing much more since people are more aware of what they want.” The innovations evolved over time and include numerous applications which for instance address also smartphones. The incremental innovations are mainly driven by customer requirements. However, the company also looks into developing their own ideas further. “We should foresee the new ways in the earliest date of developing our systems.” Although company 1 is currently mainly working on one innovation, besides the big projects the organization runs also smaller projects.

Interviewee 1 describes that the innovations usually start with the customers’ needs and that the organization therefore listens very carefully to their customers “It is always when talking about innovation, if you want to make a new product or a special new function, then we always try to interview some customers what they like to achieve with such a product and then we try to make up for the product and test in a theoretical way.” In the next step, company 1 creates a test version, where customers are involved in order to do the product testing. Interviewee 1 sums this up by stating “We might say it is five steps. First, we find out the market needs, we try to interview, then we try to make up and then the solution and then the test version.” The customized solution is next delivered and maybe also implemented as a new standard for other products. In order to make innovation processes run, interviewee 1 mentions that he has to prioritize when allocating financial resources as well as employees. Interviewee 1 expresses that throughout the entire innovation process, new ideas are needed and he mentions that ideas can arise during discussions. Then, the interviewee describes his position in the innovation process by stating “My role is to try to understand if it is economic to do an innovation. I can say that it is too expensive, we need to have another solution or if we work on it a bit more.”

He elaborates on this by mentioning the challenges he faces in innovation processes “It is a lot about priorities and the time. I think that I discuss that together with the project leaders and also we then ask the developers how much time they think that it would take to do that, despite of what the answers are, we make priorities for what we will do for the next months.” Furthermore, interviewee 1 points out another challenge when facing innovations “We work sometimes under much time pressure and in total with only eight people, which is a small team”.

Some years ago, organization 1 developed a toolbox, which serves as a standard procedure by supporting developers to solve different kind of problems in their daily tasks. Interviewee 1 explains the toolbox more precisely “So the toolbox is essential of what and how we develop and how the system works and we will develop in the future. In a certain way, because we always have, let’s say, perhaps a solution, maybe the developer in some way they can make their own solutions because they work with the toolbox.”

Interviewee 1 elaborates “[...] we can estimate time to develop and things very easy.” Moreover, company 1 has an internal system allowing the project leaders to register the projects as well as details “Who is paying for it, the description of the documents together with what we are going to do.” These documents are used in order to provide the
developer with a foundation for his work and in order to state what is going to be achieved with the project. Interviewee 1 explains that this leads to the start of the development or to an investigation. This system enables to see how much time developers need and if that matches with estimations made.

Organization 1 works with online reporting systems, which the interviewee describes as “[..] a great tool to make reports.” He elaborates on the standard reporting system they have by explaining:

“It is very important to have group reports and stuff in order to make decisions. I must have reports that is very important. Then it must be easy to distribute them, we get them in mail. We can adjust them also, so we can have reports we need, automatically. We can also use other sources, we make the data sources. We make the data and put it together in our own way.”

Moreover, interviewee 1 mentions that the reporting system provides him the opportunity to choose some specific reports when they are needed in order to meet customer requirements. Interviewee 1 explains then more precisely that the internal system allows to present all the projects the individuals have been working on during a day as well as how much time they spend on it. Interviewee 1 elaborates on the time aspect and the system “Project and developing time will also be talked about in Monday’s meetings. We also work on internal systems and spreadsheet. So we have track of that.”

In terms of the way information is handled, interviewee 1 states that he once initiated fixed meetings and since then sticks with them. “We have meetings every week and we’re talking about projects we have running for that month and next time. That’s the way we have to do it, everybody has to be kind of informed of what is the most important things we have to do.” Then he describes more precisely “It is good for everyone in the company knowing what is going on […] They have information about our products and innovations, about our customers, what business is going on and what we have to fulfill.” In addition, the interviewee 1 explains that besides the weekly meetings also small meetings with only one or two employees take place when needed “We also meet in between when we have to discuss something. We can do that. We are a small team.” The interviewee mentions that the weekly meetings are also helpful in order to make plans since the meetings are used to talk about things that were done last week and the things which will be done in the current week. For the planning, a whole month is taken into consideration allowing to understand what the team has to do in the short-term. Interviewee 1 mentions “I think that we can’t always put in new ideas, change things. We have to have a stable development plan to work with.” However, interviewee 1 also points out “If there are changes emerging in the process then we have to consider the plans carefully in order to ensure customer needs and how we can make money out of it.”

When he allocates tasks, interviewee 1 states that he pays attention to the knowledge and preferences of the individuals employees “We have one developer who has good skills of smart phones. And we have one who is really good in integrating.” Then, he mentions that “[..] we try to rotate, but is not that easy If you have only 5 developers.” Interviewee 1 notes another aspect of allocating tasks “And it is not that easy and always when we have a big customer who likes to have one developer they can rely on. For some way that customer will steer which guys are going to work with it.” However, interviewee 1 explains that employees have freedom “in a certain way” when executing tasks. He elaborates that they usually find solutions together and that employees then have some
“In some way they can make their own solutions because they work with the toolbox... We have to find a middle way often.” Interviewee 1 expresses the meaning of creativity within innovation processes:

“I always like new ideas and some developers are really good at that. Some are like machines. I always like when employees come up with new ideas. Because that means we are looking forward and looking at techniques. And try to do it that way and discuss that in our meetings and promote it. I like new things. If it’s a good idea, then we also change processes and if it is good for the customer.”

In order to support the creative contributions, the company makes city trips and also tries to keep up the salary. Furthermore the organization stimulates the enhancement of creative contributions by providing the employees with the possibility to attend different classes of their individual choice.

5.2 Interviewee 2

Company 2 was established in 2000 and operates in the software technology industry. In sum, the company consists of 34 employees, from which 31 are working within Sweden. The company is divided into three departments, software development, business development and consulting and support. Interviewee 2 views the industry as “very innovation intense”. The interviewee 2 states “We are constantly developing and adapting products to market demands, so we need to be very innovative [...]”. In order to create incremental innovations, interviewee 2 manages multiple innovation projects in parallel.

Interviewee 2 describes the sources of the company’s innovations as both “the market need and technology capabilities that is the base for how we innovate.” However, interviewee 2 mentions that the market need is the main base for how company 2 innovates. The market needs and technology capabilities are identified by a technology skilled team, which has “meetings regularly and discusses about what capabilities we have, what the market demands are. […] The result of when they come up with new ideas or how to do things is then lifted to the product steering group as a proposal for a new development.“ If the steering group agrees, prototypes are developed and tested first within the company and afterwards with customers “[...] and based on that we go into more regular product development process”. Regarding the duration of the innovation processes, interviewee 2 states that “It depends on the size of the innovation, but let’s say from 1 month – 3 years”. The role of interviewee 2 in the innovation process is “[...] to guide the people, to make sure they have the time for doing innovation, having excellent communication between people in the company. [...] Push them forward and help them to creating this innovative climate that is needed for innovations. It is all about how to communicate between people. That is actually when innovations come up.”

Interviewee 2 adds “I don’t think it is too often that we have one single individual that is coming up with innovation. It needs some feedback and processes for to make it happening.” Interviewee 2 sees the challenge in this process in the fact “that you never know the end result, it is not that visible. You actually take small steps and see where they are heading. You are developing and you have to actually start and go back again, it is very hard to estimate the effort needed and trust the people, and always use all the time in an acceptable way.” Regarding the general working conditions, the interviewee names them “fairly good” as they: “[...] are based on that we have good financials and can
afford to actually do innovations. And we are luckily to be able to spend time on innovations. In general, innovation processes resources are always scarce [...]. You have to be very careful about how to use your resources in innovation processes and the key for that is to be able to prioritize.”

Interviewee 2 states that no task performance rules exist “No, not if you are working in innovations, no rules about how you should do things.” He only mentions that bigger projects require formalized project descriptions on which the project steering group base their decisions. This is what he describes as “the whole formal process” they have. Interviewee 2 also mentions the flexibility of reporting systems within the company and that”[...] they should not be rigid or disturbing.” As an example he mentions time reports of employees and that these give him “[...] a general overview to see what is been working on and how much we spend on resources.” Interviewee 2 also states “Information is based on weekly meetings for the whole company [...] I use these to get all other information about the progress of the project and the status of the financial.” For a good information flow, interviewee 2 regards it as important that “The communication between different teams should be documented [...]” in order to be available for everybody. The interviewee 2 mentions that company 2 has time and budget plans in order to “[...] have kind of a road map with time plans”. He elaborates that in case the innovation is financed by the company itself, both plans have some scope for deviations and “are not too rigid in that sense if you talk about innovation”. However, he explains that if the innovation is driven by a customer, especially the time planning is more likely to be rigid. “If you are talking about a rigid project, where we have promised the customer to deliver in a specific time frame, then we have a more rigid budget and time plan.” Apart from that, the interviewee explains that he is “completely free” in the allocation of resources. He argues that:

“It would be a problem if I would not be free to choose the groups in a way I need it, because innovations needs people being put together. You can control it, the innovation process, by putting together some certain people. If you want to have a focus on one area, you need to mix from certain competencies and areas and then put them together. That is when you have created innovation.”

Interviewee 2 mentions that “Within the innovation it is basically the groups who decide how the task should be done, it is more like an agile way of working [...] The team decides who has the time, proper time and who is interested in. [...] It is up to the group to figure out how and what they should actually do in order to create innovation.” The interviewee also notes the importance of knowledge in the assignment of tasks. “I think employees do a better job if the task matches their knowledge.” Moreover, interviewee 2 provides the employees with freedom regarding the way they execute tasks. He motivates this by stating that “If you micro-manage them, then you probably don’t get any innovation. You have to give them freedom in order to be innovative.” In order to show appreciation, interviewee 2 shows to the company what has been accomplished so that creative actions are valued within the company. Interviewee 2 tries to stimulate employees’ contributions by having dinner with the groups or by moving to a “separate environment then we normally have in order to have creative arena somewhere apart from work”, such as moving to a bar. In sum, the interviewee sees the enhancement of creativity as a part of his normal business.

“The decisions are based on the things we are doing to have a value for the company. [...] When we make decisions we have to believe that this is something we can do business
on.” More closely related to decisions in innovation processes, interviewee 2 notes that structure is important for the innovation process, however, at the same time he elucidates that he is not able to determine how much structure is important. He sees structure as especially important for the constellation of teams as he states:

“If you want to try to be innovative in a certain area, the structure is important in the beginning in order to have people work together and to get things started as people are very much different. I think in order to be creative you need to have a focus on certain topics and then you have to mix it with the right competences. The group can be too big, but can also be too small. So you need to have a structure to put the teams together with a certain amount of people so that groups can work smoothly.”

He further notes that too much structure would hamper the innovation process as it would complicate the communication between the employees. Interviewee 2 also sees creativity as “[...] really important to consider when making decisions as we need creativity in order to survive.”

5.3 Interviewee 3

The company 3 was established in 1982 and consists in sum of 10 people, including the innovation manager. The company is part of a bigger group, which employs around 3,000 employees. In addition to the own funding of the organization, innovations are partly supported financially by this bigger group as well as by universities. Furthermore, partnerships ensure the funding of innovations. According to interviewee 3, it “[...] is a very innovative industry at the moment [...]” the company operates in, where the organization develops information technologies, both in software and hardware. The company develops incremental as well as radical innovations and runs currently more than 10 different innovation processes in parallel. The ideas for innovations are either based on the company’s experimental engagement or on the company's clients, as interviewee 3 explained ”[...] most of the projects we have is due to the customer requirements. They say we would like to have this and we start to develop that project and we develop it for the customer.”

The duration of the innovation processes of the company can vary. While the shorter ones usually take 5-10 weeks, longer ones can take up to one year. The company has two general innovation processes. If the innovation is based on a customer request, the process starts with the idea, which is discussed within organization 3 by the CEO and the technical team group who decides about the feasibility of the requested innovation. A positive decision leads to a pre-study, which in turn provides the groundwork for a project plan. After that, a test in collaboration with customers is made, if the tests pass, the development process starts. If the innovation is based on experiments, then the innovation starts with the companies own ideas and if the innovation seems to benefit the company, again, a pre-study will be conducted and then the organizations searches for partners. Followed by a project plan and test, positive results lead to a later release of that innovation. Then, interviewee 3 explains that innovation processes for him are special “In Innovation processes sometimes you don’t have the answer; in the normal work you know exactly what you can expect and when you can expect it. In innovation process we don’t have the answer, often we don’t know what the outcome would be when we started.”

Explaining his role in the innovation process, interviewee 3 states “Usually I have the ideas of what the customer needs, so I set up the frame. And then I am coaching and following up in all the steps. I work very operational in the projects that I am part in.”
He describes his main task as a challenge. “We have so many different projects and it is the biggest challenge for me to have progress on every one.” In terms of the challenge, he explains further that “[...] you have to be more patient when you are dealing with innovations. You need to challenge the employees more in order to make progress.” The interviewee adds “In innovation processes sometimes you don’t have the answer; in the normal work you know exactly what you can expect and when you can expect it. In innovation process we don’t have the answer, often we don’t know what the outcome would be when we started.” Since resources and time are perceived as limited in the organization, interviewee 3 states “We need to focus and we need to decide on which activities we are going to work on. So we need to prioritize and prioritization is a big issue.”

The company does not have task performance rules, no strict procedures on how tasks are executed exist. Interviewee 3 mentions that instead, the result is of importance. However, two reporting systems in terms of administration and documents are part of daily operations. The document system is used in order to take care of most issues are done in procedures. Interviewee 3 describes the reporting systems as flexible, however, he states that the system needs to be filled in with information and that times are to be reported on a daily basis. He states that “[...] it is important to have the fact for making a decision. How much does it cost, are we on budget or not. For that it is very important. Therefore the reporting system is covering the financial aspects the most. And also what I see, is that we are progressing. Then I can see how much we have completed of the total project and how much it does have cost me”. Furthermore, the reporting systems allow everyone in the company to be informed, as well as a newsletter, which is, based on the interviewee’s choice and distributed on a weekly basis. Interviewee 3 describes “[...] in the newsletter you can find the information of the project and then you can check in the reporting system to find more detailed information if you want. It helps me a lot and it helps me with spreading the information in the company and also it takes me a lot of time, but I think it is necessary to take that time and sent out the letter.” Furthermore, the interviewee points out “I do financial reports every month and every second week we have a skype conference where we go through what is in progress now at the moment and what is coming up. But that is more freely, we don’t have a fixed agenda for this. But we have a certain part that we should cover.” The interviewee 3 mentions that within the innovation process a project plan holds several steps and checkpoints to have control and that the plan enables to see if progress is made. When explaining how free he feels to allocate resources, interviewee 3 states “We are quite flexible here and since I am the CEO I think it is necessary [...]” He explains that the fact, that the organization works on several innovations require this flexibility because of the limitation of times and resources available.

Interviewee 3 describes the tasks in innovation as to understand how to fulfill the customer need. “And then it is very creative how we do it that is up to the technical team that we have, to come up with how. The creativity is mostly due to how we can do it the best way.” For this he says, the work staff has different knowledge and experiences and explains “Due to the project, I often put it due to a certain person because I know this person has experience with this type of innovation.” While interviewee 3 expresses to feel free in the constellation of the teams, he mentions that also employees are often provided with freedom on how to come up with a solution. Employees’ contributions are encouraged by various ways, as for instance going out with colleagues or cake in the office. Additionally interviewee 3 mentions “[...] the most important is that I give the people that are doing a good job a good appreciation and you show it and say “that was very good.” Interviewee 3 uses the way of challenging employees by asking questions in
order to enhance creativity. Moreover he elaborates “It is part of everyone’s work here. But it is part of the daily work that we need to be creative and think of other ways in doing this. I need to set up specifications for it and so we do it.”

In terms of the organization, he explains that “When the structure is so fix that I must follow a specific procedure to write up a document, or I must follow a procedure to find or do this and that and it is too much, very detailed information then it is a problem.” In general, interviewee 3 mainly considers financial aspects when making decisions in innovation processes. “Is it worthwhile to go ahead, that is the most important part that we are thinking of.” Interviewee 3 points out the need for a balance between creativity and structure “The creativity is important throughout the whole process. But also, it is very important to have structures so that you can come up to a solution or a result. So it is very hard to just point out one item [...].” Interviewee 3 mentions that too much structure would result in a loss of creativity. But interviewee 3 also notes that “If it is too much creativity it could be impossible to develop it.[...] The process needs a good balance between structure and creativity.”

5.4 Interviewee 4
Organization 4 was established in the 80’s and became part of a bigger group years ago. The company, which faces a growing stage right now has 18 employees. Based on its size, the interviewee describes the company as a flat organization. Due to the sector in which organization 4 operates, the organization employs work stuff with more practical- or theory-oriented skills in order to find tailor-made solutions for customers in the public and private sector. The sector can be described as a niche market with only a few main actors. Interviewee 4 explains that the organization, which runs several innovation processes simultaneously, creates radical innovations in order to meet the demands of this specific sector which in many cases depend on legislation requirements. The innovations they create are due to their customers’ needs, with whom they collaborate. More precisely interviewee 4 explains this relation “We need them all the way and do things in collaboration. We have also financed tests, were they put in some money and we put in some money.” Interviewee 4 describes another way to start an innovation process:

“Ideas can pop up in the coffee room, when people talk about their own projects and things that happen for instance and then suddenly realize that: Oh I have been facing the same problem so let’s talk about this. And then you start a process and it leads to a new idea and then you present it to the customer and you bring it forward in order to get an agreement to that and some funding”.

Therefore the organization makes project plans with a test design. Test are conducted in order to get further information supporting to decide for the right way in the next step. Interviewee 4 sums up “We narrow it down from an idea to a product.” He explains further that this process is undertaken faster when “[...] you have a variety of lot of competencies.” He elaborates on this “You need a lot of people, certain people with some experience, and long experience. You sit in the right group of people that can come up with this type of ideas and then to come all the way to a full scale in implementation”. While the testing can be done within 2 months, he points out that “[...] to go full scale and get acceptance for this will take several years”.

Interviewee 4 explains his role in the company's innovation processes by starting to explain that he knows the products and processes from the scratch and mentions “[...] I
think that has broaden my view a lot when it comes to problem solving and what the real issues are in the society.” He also mentions that he takes the legislations and authorities into consideration. When Interviewee 4 describes his task, he states “I put the small problem in a larger scale and when you have a specific problem I can get a good view of it quite fast since we are a small company. Maybe we take three steps that will bring us closer to the solutions. We make that quick and we present it to the customer. In a small company I can combine the whole variety of knowledge.” Furthermore he elaborates on his tasks by pointing out “I think my main task is to guide things into the right directions, knowledge and experience, and try to guide my co-workers to go early on the process the right way. Provide them with right help.” The interviewee explains that in innovation processes “You can’t do everything. You don’t have the resources you don’t have the money for that. You have to be efficient in some way and for that you need the structure.”

The company has task performance rules inherent as the interviewee 4 describes “We have some written reports or memos, they are comfortable. We have some certain structure for this, if we deliver something it looks the same. The content of course differs [...]”. He elaborates “The need for basic functions, organizational matters, you need some structure that you don’t need spend so much time, but some similar things they should just work. Like going to car in the mornings, the car should just start. Otherwise you would spend a lot of time with that.“

The reporting systems in the organization are described as “quite flexible” by the interviewee. When he points out that the reporting systems are project related, he explains further “And in the field I think they need to be as well, because no questions are completely similar to another one.” He explains the need for specific data “[...] authorities have different guidelines that we have to follow, then you can go away from them if you motivate it well and to be able to do that you have solid data. In order to show off that you have a good reason to step outside that you need to have some good data within the company.” In terms of the innovation process the interviewee states further “You should not set too many standards or standard operating procedures [...]. Not too much of that. Sometimes it is needed familiar and looks like this. Or it might be related to legislations or guidelines to follow. In general, it should not be too blocked, not too much standards.”

The interviewee states that the current information-handling rules need to be improved due to the growth of the company from 5 to 18 employees “I think we would have integrated some more structure [...], because we were a few people and now we are three times more and that sets some specific demands on the organization and structure.” He elaborates on the growing aspects when mentioning “And also, we have written guidelines documents if someone new comes, this person can read these ones and knows what is going on. Because now we are growing and then it doesn’t work without this anymore.” The information flow within the organization is handled by weekly meetings “[...] we take protocols that we communicate to everyone that maybe hasn’t participated in the meeting. So that everybody has the same information base within the company.” Interviewee 4 mentions an internal quality system which helps him in letting everyone know what he/she has to do, furthermore he points out that this is ensured by starting and also follow-up meetings. Then the interviewee elaborates “Otherwise it would only be chaos and everyone would sit on their chair, isolated, not knowing what others are doing and then I would only put them in a team together in the end.”
Interviewee 4 talks also about plans and how strictly they are handled “We have several standard documents that set the rules between consultant and customer when it comes to financial aspects. You have a budget and you need to follow that, when you go outside, you need to communicate that and that is quite strictly regulated. These kind of things I have to follow.” Furthermore interviewee 4 elaborates on plans when talking about them in relation to the projects the company has “If you set a structure and a project plan, of course, you should be able to perform and change, it should be flexible. But we cannot do that all the time. Because then we lose the trust from our customer. [...] And if you change this too much, I think it would be unstructured and chaos.“

Then he explains that a lack of plans would cause chaos, and that some structure is needed in order to set how you work, which he explains should be as clear as possible under the project to show what they will do in a project and enables all employees to have a clear role. Then he mentions “So of course flexibility, but you need to follow the planning, roughly at least. Otherwise it will be chaotic.” Then interviewee 4 mentions that deviations from plans can arise and he mentions unexpected sickness of employees as a specific example. Then he elaborates “[...] if I take a decision I have to have a good overview as a manager, of all projects. I need plans, I need to have that overview in order to be able to make decisions. Wrong decisions would cause customers that will not be as satisfied as we want, because we don’t follow the time schedule then and everything is connected.” The interviewee 4 points out that plans are helpful in order to make decisions and prioritizations on a daily basis.

Interviewee 4 explains his freedom in the constellation of his teams “I am completely free and sometimes different time schedules for different projects create also a need for a flexible constellation. So I might need a specific person in one project and change people. That happens sometimes. Small changes happen on a daily base and you have to make decisions carefully because customers might be sensitive to that, and especially towards specific persons.” however, he explains that therefore “I need to know my co-workers, to know at what they are best at and you want to know the journey that you have from A to B and you need to set up the best team for that journey and for that you need to know what their competencies are, at what they are strong and what are their less strong sides.” He mentions that the employees are skilled and know how to do things. He elaborates on the freedom he provides “I am not looking over the shoulder, you have to trust them. And if it doesn’t work, you have to tell them.” Then the interviewee explains further that employees who feel trusted can bring solutions forward and states “I think they become more efficient, creative and with that we get better results with our innovations.” Furthermore he describes that: “[...] people work very differently and in what is their personally best way and I think you need to have acceptance for that.” He points out that people are individuals who differ and that people therefore work in different ways. He explains further “Some people are very structured while others are very non-structured and they need to be that as well. And a very non structured person, for me, needs also some help to get some structures that really helps them [...]”

Talking about creativity, interviewee 4 explains “I would say the whole structure of this company is creating an atmosphere that enhances creative contributions, because of this it gets easier to discuss ideas with everybody and for that maybe see into an idea that you have and that can grow by having this creative discussion” Then interviewee 4 elaborates on his impact in discussions and what enables him to solve problems “Sometimes if I hear ideas I try to add some aspects to that idea, that could become a new thinking. I try to think around and also to contribute with what I know. Add another aspect of it and it
could become that problem solving.” In general, organization 4 has a mentality where positive words are used on a daily basis in order to encourage employees to make creative contributions, and more precisely they facilitate this when people do something that is outstanding. Moreover the organizations shows appreciation in the form of “[...] providing free coffee, having coffee breaks, or we go out for lunch together. We have gatherings with the whole office, motivators as well are do something fun apart from work.” In order to stimulate creative thinking interviewee 4 states “We have that possibility, if you come up with an innovation, that the idea, the patent, belongs then also to the inventor and not only the company. This is also our motivator for innovation.” He concludes then that:

“Creativity is so integrated in everything you do in an innovation process, in our daily work. Especially early in the innovation processes we have many brainstorming’s, where ideas come up. [...] That is how you create a map for how you are going to bring this forward, I think that is part of the innovation early in the process and of course you try to find out all the unknowns during this journey, and you know more and more.”

5.5 Interviewee 5
Company 5 was established in 1998 and has in sum 30 employees, of which 23 are working within Sweden. Within Sweden, the company has three departments, consisting of marketing and management sales, the software team and the content team. However, interviewee 5 notes that the department boundaries are not fixed, as employees can be involved in different departments. Interviewee 5 describes the target group of the company within the software technology industry as a growing target group in a dynamic technology driven industry. The interviewee 5 expresses that the innovations are incremental as well as radical, mentioning a radical innovation which was created by the company and which then changed the whole industry. Interviewee 5 further describes that he manages different innovations in parallel and that the company’s innovations are extremely creative, as the purpose of the products is to enhance the customer’s creativity. Further, he explains that “We try to see the product from an extremely intense perspective of our users in order to improve our innovations”.

When being asked about how the innovation process looks like, interviewee 5 explained that the company does not have “[...] a structured way in developing things.” Therefore, the interviewee finds it difficult to generalize the way innovations are created. He explains “then it is about prototyping, and iteration, taking a path and realizing new things and going back again. It takes on its own life somehow.” The interviewee concludes that innovation processes can last from six months to six years. When explaining his tasks, once again the interviewee points out the difficulties involved in the process “my task is actually to communicate the vision of the product [...] and to make sure that we meet the targets. [...] But the process of coming up with what you should do is much, much, much harder than actually doing it. It takes so much time and so much re-iteration.” Another challenge the interviewee sees are the uncertainties involved in the innovation process in terms of how customers will accept the innovation. The interviewee describes himself as “[...] the contact person for any problems arising within my team.” He is concerned with the administrative process, which he defines as keeping track on the resources his team needs, such as time or tools. As the most important task interviewee 5 regards the assessment of whether or not new ideas or contributions would be valuable for customers. “The most important task I have as an innovation manager is actually to filter everything
that is in the air all the time, because people can come up with crazy ideas. I have to figure out if these ideas can bring value.”

Interviewee 5 describes task performance rules as not being relevant for him. “I don’t think we have systems or frames or rules for doing things in a specific way. I don’t care about these things. The only thing I am caring about is the result.” Nevertheless, the interviewee points out that the further the innovation process progresses, the more important structure gets. “When you start you can move around freely, and then when you process, your movements are limited more and more until the release date. Of course, at the end it is always much more structured.” The interviewee explains further “[...] In the mid-term of the process, when we pretty much know what we want to do, then I want structure.” In this context, interviewee 5 mentions the importance of reporting systems by adding “Then I need weekly reports, I want to see what has been done by my team in order to decide what will be done next week. Then I use structure in order to keep track of things”. The interviewee explains that information is exchanged through regular meetings. Interviewee 5 mentions the use of whiteboards which allow a fast communication of important information when “things really start to heat up and then you have to define the best solutions to problems really fast. Like putting things on the whiteboard or paper instead of writing it on the computer is like a solution to help us move faster.” Interviewee 5 describes that he is not issuing specific plans due to the complexities and uncertainties innovation processes have inherent. “Because it is very complex, you can’t have everything planned ahead.” He adds that “we make a document, and that is the first thing, we can just throw it away as soon as we get started doing the product. Because then we find completely different ways.” The interviewee also describes that he feels free in the allocation of resources.

The assignment of tasks the interviewee describes as flexible, stating “I ask the team who wants to do what. Or I decide in a rational way and assign tasks to who is best at the specific task”. The execution of the task interviewee 5 describes as free. He adds “They have a high degree of freedom how they develop in terms of how they solve problems. I kind of look upon it from the black box perspective: You have input and you have output, and that is defined. Whatever they do inside, as long as it is efficient and in time [...], I don’t care what they do.” The same freedom applies for the constellation of teams. Here, the interviewee explains “I am the person who is free to choose. However I also consider wishes in the constellation if my team expresses preferences.” Interviewee 5 mentions trips on which all employees go together and profit sharing as ways to show appreciation for the contributions made. In order to stimulate employees and enhance creative contributions, the interviewee challenges employees to think outside the box and to question new ideas by asking what problems the new idea would solve. He elaborates on this by explaining “[...] We do brainstorming for instance: Sitting down, discussing, asking questions, challenging the answers, pushing for different thinking. Telling people: you cannot do it that way, you have to find another way. [...] I try to push my team, without abusing them.”

Interviewee 5 explains that “Every little decision can have an impact that I cannot foresee.” Therefore, the interviewee always tries to consider the goal set for the innovation process when making decisions. Interviewee 5 describes that structure influences the decisions he makes by helping him to solve arising problems. “If you have to solve a problem, you cannot only solve it by just being genius. [...] You have to pick up feedback and impressions from the process [...] and you have to have a certain goal and that kind of defines kind of what you can do if you make decisions. That is maybe the
ultimately in some sense. “The interviewee elaborates further on structure by mentioning “I want to choose the structure myself, because I am the best guy to decide. [...] I don’t think I would be happy if I would have someone telling me how to run my department.” The interviewee also relates his freedom in decision making to the stable financial situation of the company. “I don’t have economical pressure on me, we are doing pretty well. [...] If we wouldn’t have this financial stable situation then I would probably have to make other decisions. But I also think that we would not be successful then in this business.”

5.6 Interviewee 6

Company 6 started as a spinoff of a governmental company in 1997 and is currently operating in two market segments within the technology industry by producing hard- and software. One of the market segments, interviewee 6 names “fairly mature”. He further mentions that “innovations are driven by governmental rules, infrastructure changes and end of life of components”. The interviewee also mentions the infrastructure changes and end of life of components as innovation drivers in the other market segment. However, the interviewee adds that here, the development of innovations also depends on “the product life cycle, “you have to operate on.” The company has 37 employees in sum. As the R&D manager, interviewee 6 is responsible two project leaders, three employees doing customer support and eight developers and soon for twelve, as four developers have been recently hired. The interviewee is part of the company’s management team which consists in total of 4 people. The current innovations the interviewee characterizes as incremental and market driven, as they are based on customer requests. Interviewee 6 mentions a radical innovation the company has developed two years ago, which “actually boosted the company and was one of the big things we did and what made the company what it is today.” The interviewee adds “We are unique in the world to do that.” The company is running multiple innovation processes in parallel, which are not only based on customer requests but also on own ideas and input.

Customer requests are identified either by the project managers, who are in close contact with two main customers or by sales representatives, who forward customer requests to the R&D department. The interviewee explains further that all of the input is presented to the product board, which consists of the interviewee, the sales manager, the CEO and two employees from the product development. “Through that product board we decide how to continue with the idea that came in.” The interviewee states, that a pre-study is conducted and specifications for the further development are made. The interviewee mentions specifications such as estimations on the time frame and the potential return on investment and the resources needed. The interviewee concludes “We have the specification, we have the manpower, we have a good financial base and we know what we can do and how we can do it. So that is the way it is actually decided in this company.” In order to keep track on the process and the tasks, interviewee 6 uses a board with post-its and daily stand-up meetings with the team. He explains “We have the stand-up meeting in the morning and we have the board with the yellow post-it and we go through that process every day. We check what we did yesterday, what is stopping us and what are we going to do today. [...] We make sure that we are not losing anything and that we have progress in all the projects we are actually doing.”

The interviewee states that, depending on the scope of the innovation, the time frame of innovation processes can be from one month to one year. The interviewee describes that currently, the developers in the team have very specific skills and knowledge, which is
why not all tasks can be assigned to all developers. The interviewee states “So every task is more or less dedicated to one person who worked on the development before.” Due to the fact that the company recently hired four new developers, the interviewee explains that changes of the structure within the team are necessary. He explains

“I have decided, to split the old teams that I have and I will take one senior and one junior developer and start some type of mentorship and make sure they are working together to spread the risks [...]. That is actually the way I am trying to change the structure of the way we are developing [...]. That is my challenge here in this process. I would get more out of my developers doing these mini teams. [...] Then we have the goals better set up”.

The interviewee also explains “So right now, what I am trying to do with the new employees is to put them into things they have never seen before and take that from senior developer into junior developer. One, to get them into what we are actually working with. Taking it away from a senior, to get them into new stuff and get them into more creativity and being more innovative [...]”.

Interviewee 6 sees the change of the structure as his main task but also main challenge in the innovation process. “The final goal for me as a manager for the R&D team is to make sure that we get structure in the process.” The interviewee points out the importance structure has for innovation processes by stating “That is a structural journey we’re doing right now. That is the interesting part, to get structure in this, because then you open up the creativity and the possibility for innovations.” He also describes the influence structure has on the working atmosphere within the company, stating that a rather unstructured way of dealing with creative ideas led to stress, whereas the establishment of divisions calmed down the atmosphere.

The interviewee describes his role in the innovation process as “significant” as he is not only responsible for the development team but also chairman of the product board, which decides whether or not creative ideas are adopted for new developments. When further describing his tasks, interviewee 6 adds “I am 100% percent responsible for what happens on a daily basis.” The interviewee explains the necessity of him knowing what happens on a daily basis. “I have full control over what the developers actually do. [...] It is essential that I know what my team is doing, to be able to tell the customer and the organization why we can’t deliver in time, what happened and why I changed the priority.” Interviewee 6 mentions the daily stand-up meetings once again, explaining that these do not only allow him to have full control on the happenings, but that these meetings also enhance the creativity and exchange of knowledge and ideas between the employees. He states that the meetings allow “an open discussion about eventual problems, innovations, changes and things that actually create something new. This is where the creativity in the company actually comes.” The stand-up meetings also enable interviewee 6 to be informed about critical happenings faster and thus, make decisions about stopping, continuing or changing the processes if needed. When making these decisions, the interviewee always focuses on the customer as he sees the customer as the main object of the innovation process.

As an additional challenge in the innovation process, interviewee 6 mentions the realization of ideas which are forwarded to the R&D department by sales representatives. The challenge in this the interviewee sees in the fact that some promises the sales representatives make towards customers are difficult to implement. Moreover, interviewee 6 sees the challenge in coping with the uncertainties which innovation
processes have inherent while adhering to the delivery date. He points out “ [...] You have to fix unknown things. [...] The date is set from the beginning, and that is the challenge in innovations. The challenge is actually that you don’t know which route to take. Now and then you have to do a pre-study and a test in order to figure out if we really can do the things we thought we can do. And suddenly it can happen that we have to start all over again. Because the route we took wasn’t the right one.” The interviewee also points out the uncertainties which are linked to the launch of an innovation in a different region, when having neglected that different regions can have different requirements and therefore imply the need to re-develop the innovation.

The interviewee characterizes structure as an essential factor for an organization if it wants to grow. He states “Through structure, everybody knows what to do [...] and what their responsibilities are. You know on what you can or cannot decide. All that type of structure, all that type of work process is the thing that you have to adapt to. Otherwise you cannot grow.” However, although the interviewee views the structural change as one of his main tasks, he states that he can only work on the structure within the structural frame the company sets “I am not the one, who is setting the structure. The company is setting the structure, the way that we work and the rules that we have [...] I am managing the structure. [...] I will not overrule the structure or my limitations, but within my mandate [...], I would definitely use that power to tweak the structure to get even more out of my department.”

As task performance rules, the interviewee describes the handling systems in order to solve upcoming problems. These handling systems categorize problems into critical and noncritical and specify how to deal with each of them. The interviewee explains “A critical problem we have to maintain within 8 hours and a non-critical problem we have solve within 24 hours. That is how we know how to manage different types of problems.” The interviewee states that these systems provide “a structured way of working [...]” During the problem handlings, interviewee 6 receives reports with information about what problems were handled in which way, in order for him to keep track on the happenings. However, interviewee 6 notes that “I don’t use it in the daily work” He adds “I have a possibility and see how the developers and my stuff reported the time and what they actually do.” Interviewee 6 describes that the information flow is organized by an internal web page, which entails protocols of the decisions made in all meetings and which everybody has access to. The interviewee mentions the meetings of the management group as the only exception, as these are kept secret. These monthly management meetings also contribute to the information flow, as important issues such as financial conditions are discussed. Interviewee 6 expresses his freedom in allocating resources by stating “I would say that I have 99% possibility to do whatever I want to. It is only my CEO who might have a different angle on something. And if I would not have this freedom, we would have less innovation.”

Interviewee 6 describes that tasks are expressed by post-its which show the different work-packages in ongoing processes. These are assigned according to the skills employees have. The way these tasks are executed is up to the employees. “They have total freedom in the execution of the tasks. [...]” The interviewee explains the granting of freedom by stating “They are the developers. I can’t read their code. I can’t say this is completely wrong, this is not the way to do the task.” In order to show appreciation for creative contributions, interviewee 6 buys cake, takes the team out for lunch, puts stars on the board or uses the morning meetings to tell everybody if somebody has accomplished something. The interviewee concludes “I can’t come up with all the ideas.
Therefore it is up to me to show everybody that we have a creative environment and people get credit for what they do." In order to stimulate employees’ contributions, interviewee 6 makes sure that they are “Not stealing peoples’ ideas. The one who came up with an idea, is the one who gets the benefit for it.” Additionally, the interviewee adjusts the salaries or gives new titles in order to stimulate employees’ contributions. Also the interviewee sets a meeting once per year in order to discuss employees’ needs and suggestions.

Interviewee 6 explains that the influence the changing structure and the fast growth of the company has on the innovation process. He states “Well, due to the fact that we need to nurse our big customers, we have to say no to some of the more creative ideas. And that is because we are growing really fast.” When further elaborating on the general importance of structure in the innovation process, the interviewee explains that “Structure is a good thing, but you must be able to take short cuts now and then. If everything about innovations in a company is based on processes, and everybody reads them as the devil reads the bible, you end up in pointing fingers […]. Which means that too much structure will kill innovations. So, you need to find the balance of what is needed in processes in companies to grow.”

The interviewee also states that if employees get rejected in the product board a few times with their creative ideas, they “[…] would not come up with a new idea within the next two years.” In order to minimize the risk of getting rejected, the interviewee sees a necessity for employees to present a little bit more to the product board than only the idea, such as benefits for the company or relevant market information. The interviewee thinks “then more things would go through.” In case unexpected situations arise in the innovation process, interviewee 6 first considers the size of the customer and how critical the error is that arose in order to make decisions.

5.7 Interviewee 7
Company 7 was established in 1995, has four offices within Sweden and 60 employees in total. The company operates in the software industry, in which the company has to “innovate continuously”, as interviewee 7 states. The interviewee describes these innovations as incremental and usually driven by customer’s problems. “[…] to find the problems of the customers and the solution to it, that is our kind of innovation. […]. So, we focus on that, day to day, minute to minute.” These problems are captured by sales representatives or consultants, who are in contact with the customers and discuss their needs. Interviewee 7 mentions that half of the employees are working only on software development. These have been “divided into focus groups, each one working on certain kinds of products and issues.” These groups have weekly meetings, where they discuss current issues and brainstorm. Interviewee 7 adds “We normally have multiple projects going on in parallel. […] It is a lot happening at the same time.” He further explains that, depending on the innovation size, the process can last from three months to two years.

In case the sales representatives or consultants identify a problem on the customer side, it is passed to the development team, which forms a pre-study and gathers all important information about the initiation of this new idea, such as necessary resources and if the idea fits into the current portfolio. Then, the management group gauges the benefits and costs and decides whether or not the innovation process will start. Interviewee 7 adds “Then there is a little bit of iteration, we never get it perfectly right from the first time.” Interviewee 7 explains the iteration with the fact, that not all information are available
from the very beginning of the process. “Typically we don’t know everything. We don’t know how to solve the problem or how to implement a solution. Honestly, early in the process, we take decisions more based on feelings.”

Within the innovation process, interviewee 7 sees himself as an enhancer of new ideas. He describes how he started to change the structure in order to allow more creative ideas after joining the company six months ago.

“Well, when I came in here it was a very closed group. Not many people were thinking about innovations [...] They were just focused on the delivery. And I tried to create a quite open atmosphere, a structure where everyone can propose a development. And it should be easy. Before I came into, the decisions were already taken on the projects because there was so much bureaucracy.”

Interviewee 7 explains that too much pre-work was needed in order to start with a pre-study. He concludes that “Before, all the details needed to be set up before you could take any decision. And that stopped a lot of new things to even come up. The ideas never showed up because there was so much administration needed to just propose an idea.” Interviewee 7 changed the way ideas are proposed and this lead to an increase of new ideas as he explains “Before you get started, if you tell me how long the pre-study is and if you present good arguments to me why you want to do it, then go ahead and do it. And then, after a few weeks we look on the details. [...] I believe this enhanced the new ideas because the number of ideas coming up increased since we have made this structure.”

Interviewee 7 further states “Creative balance is my task. Finding this balance that people think about both, about creativity and technology on the one side and the commercial usage on the other side, because there should be a market for the new idea [...] and it should solve a problem.” In order to achieve this balance, interviewee 7 uses a checklist when looking at new ideas. He expects employees with new ideas to propose “One line on the description of the technology, but also on line on what problem it is solving from the customer side. [...] It is not long or bureaucratic.” Before changing the structure in terms of a change in the way ideas are proposed, interviewee 7 was facing the challenge to even receive new ideas. He explains that “Initially it was a big challenge in just finding an idea, it is the climate, so that ideas come up. [...] If someone wanted to build a product there was so much bureaucracy on it in order to get a decision, so I removed this bureaucracy to a later stage of the development. I removed the hurdles to get that decision made.” Interviewee 7 adds that “Now, I get these ideas quite well, so that is not the challenge anymore. Now my challenge is to prioritize between them. We can only do half of them or perhaps one third.” Interviewee 7 states that “We have a lot of projects ongoing with quite a pressure.” However, the interviewee describes this pressure as positive as the company is able to deliver and sell the solutions developed. He also states that the financial situation of the company is good.

When characterizing the procedures of innovation processes within the company, interviewee 7 mentions routines which determine “[...] what should be delivered in one phase to be able to go to the next one. It is not very bureaucratic.” Checklists ensure that delivery criteria’s are adhered to. Interviewee 7 expresses his view by stating “I hope that they give everything that is needed, but not too much, since this can be so bureaucratic. Finding the balance, this is what we need to have.” Interviewee 7 describes the importance of daily reports by stating “[...] the important financial information is very critical and very inflexible.” In contrast, he mentions that “I try to keep the milestones
for each process and we have time reporting systems so that we can see what people have been working on.” As employees are working on different innovations in parallel, Interviewee 7 finds it important to keep track that everybody spends the appropriate amount of time on each process. On the other side, the interviewee uses reports when launching the innovation in order to follow up on the customer satisfaction and profitability of the innovation. The former serves the need of meeting the customer expectations and the latter the evaluation whether the sale justifies the investments made.

Interviewee 7 mentions several ways in which the information flow within the company is organized. First, interviewee 7 writes a newsletter once or twice per week. Within the innovation teams, the interviewee mentions daily morning meetings of 10 minutes which serve the quick exchange of important information and updates on current issues. Moreover, interviewee 7 adds that “we also have the management meeting, once a week, where we discuss current issues. It is more about problem solving.” He mentions that “When I joined the company, the management meeting was once per month, instead of once per week.” Interviewee 7 perceives a meeting once per month as too long and filled with too much information which accumulated in one month. He also expresses the importance of agility and speed of action and decision making by stating “We find the problem at the customer [...] and we need to be able to respond to that request pretty quickly, otherwise it is gone.” Therefore, interviewee 7 decided to change the monthly meetings into weekly meetings.

Interviewee 7 explains his freedom in allocating the resources. “I have my budget to meet, and within my budget I can do what I like”. However, when referring to human resources, he notes that “I can hire [...] 1-3 people a year, but if I want to hire more, I need to give a business case to the board. To move people around between projects, departments and functions, I have complete freedom.”

The assignments of tasks depends on the size and importance of tasks. Critical tasks are delegated by the interviewee. The interviewee adds “And between the team internally, they divide the details. On who is doing what. It is quite decentralized [...]”. The interviewee concludes that the assignments of tasks are “best described as case by case”. When explaining the freedom employees have in executing tasks, interviewee 7 states “They do it as they like. And hopefully that fosters some creativity.” In order to show appreciation for employees’ contributions, interviewee 7 presents gifts, grants additional days of vacation or organizes trips. On a daily basis, the interviewee shows appreciation by giving feedback. Interviewee 7 once again mentions the removal of administrative rules as an enhancer of creativity. However, he also expresses the possibility of initiating one day per week or month in the future where employees “[...] can work on something that they like.” However, he concludes that “Today, I don’t feel I need to do that.” He adds that another structural change which could enhance creativity is a discussion partner, who looks for and listens to new ideas. “Some architect or senior development person [...] could probably help so that ideas come through more easily.” In case unexpected situations happen, the interviewee tries to find out the factors which have caused a deviation from the plan and always considers the profitability of the innovation when making decisions in such cases.
6 ANALYSIS AND DISCUSSION OF EMPIRICAL MATERIAL

In the following chapter, the empirical material collected from all interviewees will be analyzed in order to draw conclusions on the research topic. We will analyze the empirical material by identifying patterns between the interviewees and comparing the material to the theoretical framework as described in section 4.4. Overall, the analysis holds three steps. The first step, which will be described in sections 6.1-6.3, aims to provide a picture on the meaning and handling of innovations in the respective companies. The second step, which is done in section 6.4, focuses on the SOPs and allows to draw conclusions on the influences structure has on decision making regarding structure. The third step, which is shown in section 6.5, enables to shed light on the influence structure has on decision making regarding creativity.

6.1 Importance of Innovations

From our empirical material we could see that innovations are crucial for all examined organizations as the companies feel the need to keep up with the environment and the connected external demands as explained by interviewee 2 “We are constantly developing and adapting products to market demands, so we need to be very innovative [...]”. This understanding of the interviewees is in line with theory, which says that innovations are important as they contribute to their existence (Tidd & Bessant, 2014, p. 9) and enable to compete with the market (Oke, 2001, p. 272). How crucial the innovations for the companies are is also highlighted by the fact that all interviewees described the industry they are operating in as innovation intense and also by the fact that 4 companies put even the CEO in charge of the innovation process. Furthermore the importance of innovations is underlined by the risks the companies take as most interviewees described that their innovations are characterized by many uncertainties. Interviewee 4 explained when talking about the innovation as a journey “of course you try to find out all the unknowns during this journey, and you know more and more.” Interviewee 5 sees the uncertainties in the innovation process in terms of how customers will accept the innovation. These findings presents an agreement to the theory stating that innovations are risky as they hold many unknown variables and also that they rely on the user’s acceptance (Pavitt, 2005, p. 101). We discovered that all companies are highly dependent on the users, as mentioned by interviewee 3 ”[...] most of the projects we have is due to the customer requirements.”. Overall, we could see that all companies focus on their customers when creating innovations, which is in line with what theory calls market pull (Johnson et al., 2014, pp. 296-297).

6.2 Innovation as a Process and Tasks of the Innovation Managers

Overall, it was obvious that all interviewees manage innovations as processes. All interviewees largely follow sequential, sometimes overlapping phases, for which they have set up specific procedures. Interviewee 2 for instance described three phases when creating innovations. The interviewee characterizes idea generation as the first stage, and the specification and proposal of this idea to the product board as the second stage. The third stage implies the “[...] regular product development process”. Although some interviewees mentioned iterations in the process, generally speaking, all interviewees described largely three stages of generating the innovation. This is in line with the theoretical basis on innovations as processes, as these also highlight very similar stages of innovation processes to the ones described by the interviewees, namely Initiation, Developmental and Implementation/Termination Period (Van de Ven., 1999, p. 23-24).
Overall, the interviewees view themselves as fully responsible for daily tasks in the innovation processes. As one of the most important tasks almost all interviewees mention the guidance of different aspects in the innovation process. Interviewee 4 states “I think my main task is to guide things into the right directions, knowledge and experience” Also, Interviewee 2 notes that he needs “[...] to guide the people, to make sure they have the time for doing innovation [...]” These tasks are in line with the theory, which states that innovation processes need managers to guide and successfully manage not only employees, but also knowledge and equipment (Tidd et al., 2001, p. 45). As an additional important task almost all interviewees describe the prioritization of activities. However, the interviewees also see prioritization as one of the main challenges in innovation processes, as interviewee 3 describes “We need to focus and we need to decide on which activities we are going to work on. So we need to prioritize and prioritization is a big issue.”

6.3 Importance of Structure and Creativity

When looking up on the meaning of structure in innovations, we noticed that all interviewees value structure in innovation processes. Especially interviewees 4 and 5, who are facing a fast growth of their companies, emphasize the importance of structure for their innovations. Also when looking upon innovations in general, all interviewees agree that they cannot be created without structure. This is also obvious when interviewee 2 notes “it is very important to have structures so that you can come up to a solution or a result.” These views are in line with theory, which highlights that no innovation could be generated successfully without an established structure (Tidd et al., 2002, p. 318). However, there is also common agreement in terms of the importance of creativity in the companies’ innovations. Interviewee 6 shows where creativity is needed and where it starts “an open discussion about eventual problems, innovations, changes and things that actually create something new. This is where the creativity in the company actually comes.” Connected to this, again creativity for innovation processes is highlighted. Interviewee 2 for instance states “[...] we need creativity in order to survive.” and interviewee 3 highlights the continuous need of creativity by stating that “[...] creativity is important throughout the whole process.” The importance of creativity for innovations is also clearly emphasized by literature, arguing that creative ideas are indispensable for the generation of innovations (Woodman et al., 1993, p. 293; Tidd & Bessant, 2014, p. 7).

Moreover, we see that the companies handle creativity and structure in very interrelated ways. As interviewee 4 explains that creativity can be seen as anchored in innovation processes and thus also in the structure “Creativity is so integrated in everything you do in an innovation process, in our daily work.” We noticed that this was a common way of dealing with both elements among the interviewees. Therefore, when looking more precisely at the interlinkage of both, we realized that interviewees underline the fact that both elements are integrated and inseparably connected to each other. Interviewee 6 for instance highlights the need for structure in order to achieve creativity “That is a structural journey we’re doing right now. That is the interesting part, to get structure in this, because then you open up the creativity and the possibility for innovations.” Interviewee 4 also adds that “I would say the whole structure of this company is creating an atmosphere that enhances creative contributions [...]” This view is contrary to the theoretical basis, which emphasizes the contradiction and mutual exclusion of both elements (Tidd & Bessant, 2014, p. 86).
6.4 Standard Operating Procedures

In this section, we will examine the influence structure has on the decision making of interviewees 1-7 regarding structure. We will analyze one SOP after another. First, we will determine whether or not companies 1-7 have the respective SOP inherent. Second, by using the decision types of programmed and non-programmed decisions, we will analyze in how rigid or flexible ways the existing SOP in companies 1-7 occurs and if the respective SOP presents programmed-decisions to the manager or if the company handles it in a way that rather relates to non-programmed decisions. Lastly, we will shed light on the influence the SOP has on decision making.

6.4.1 Task Performance Rules

Existing Task Performance Rules

In general, it was obvious that most companies have some type of task performance rules inherent in their structure. Only companies 3 and 5 do not have task performance rules. Interviewee 3 clearly stated that no task performance rules exist “When the structure is so fix [...] then it is a problem.” Interviewee 5 clarified “I don’t think we have systems or frames or rules for doing things in a specific way.” All other interviewees however expressed the existence of task performance rules. According to interviewee 1 these are represented by “the toolbox is essential of what and how we develop and how the system works and we will develop in the future”. The toolbox, which was implemented years ago, became already a settled part of the structure and provides to a certain degree a choice of tools on how to execute tasks. Although a choice exist, the toolbox can mainly be seen as more rigid guidelines for the employees. Thus, we see that the structure of the company sets rules of how tasks are executed. Similar to this, interviewee 7 described checkpoints which entail criteria defining “[...] what should be delivered in one phase to be able to go to the next one. It is not very bureaucratic.” Although interviewee 7 described this procedure as not very bureaucratic, these checklists can still be seen as task performance rules described by Cyert and March (1994, p. 124), as they make the outcome of the task execution predictable to a certain extent. Moreover, the checklists ensure that delivery criteria are kept and therefore reduce the uncertainty of this procedure (Cyert & March, 1994, p. 121). Interviewee 2 and 4 both mentioned the procedure of having formalized documents which regulate procedures and provide a guidance for employees. Finally, interviewee 6 mentioned problem handling-systems which set the way problem-handling tasks are performed. All of these rules mentioned by the interviewees are in line with the theoretical basis for task performance rules, stating that procedural rules like checklists or formalized documents provide a guideline for everyday tasks of employees by setting the way in which they have to be handled (Cyert & March, 1994, pp. 121-122).

Non-Programmed Task Performance Rules

However, the intensity of these task performance rules varies widely between the different companies. Regarding these rules, it seemed that some are handled in a far more rigid way than others.

While the companies 3 and 5 do not have any task execution rules, in case of companies 2 and 6 we noticed that the task performance rules are handled in a very flexible manner. More precisely, the formalized project descriptions interviewee 2 mentions, are only required for big projects, however the usual rather small innovations do not require such formalized procedures as the interviewee pointed out that there are “no rules about how you should do things.” Despite of problem-handling systems, interviewee 6 emphasized that employees “[...] have total freedom in the execution of the tasks. [...]”. The flexibility
of how tasks are executed in companies 2, 3, 5 and 6 seems to be handled in a way enabling non-programmed decisions. This flexibility can be described by the underlying unstructured problem, which interviewee 6 explained “[...] You have to fix unknown things. [...] The date is set from the beginning, and that is the challenge in innovations. The challenge is actually that you don’t know which route to take.” Also interviewee 2 notes that, in innovation processes “[...] you never know the end result, it is not that visible. You actually take small steps and see where they are heading. You are developing and you have to actually start and go back again [...]” It seems that the lack of task performance rules are rooted in the fact that innovation processes imply uncertainties, which cause re-iterations and changes in the path. Through this, the execution of tasks is not predetermined. Therefore, task execution in these companies is subject to non-programmed decisions, as these deal with uncertain and novel underlying problems (Ivancevich & Matteson, 1990, p. 516). Contrary to the theory, which states that task performance rules are embedded in the structure of an organization, these rules are not a standard operating procedure in companies 2, 3, 5, and 6. It seems that the freedom in the execution of tasks and the fact that iterations can be overcome, might be explained by a good financial base, which interviewees 2, 3, 5 and 6 jointly underlined. Therefore, it can be argued that these companies have the financial possibility to accept risks and uncertainties which are inherent in non-programmed decisions (Ivancevich & Matteson, 1990, p. 516) in order to get the best result. This assumption gets even strengthened by the clear statement interviewee 5 made “If we wouldn’t have this financial stable situation then I would probably have to make other decisions. But I also think that we would not be successful then in this business.” To sum up, it seems that a stable financial situation allows for risk taking and non-programmed decisions regarding task executions in innovation processes. Interviewee 3 highlighted that the result is more important than a specified way of doing things. This finding implies a need for theory, when it is related to innovation, to take into consideration that the focus lies on the best result, which does not consequently mean to provide an efficient way.

Programmed Task Performance Rules
We noticed that the utilization of task performance rules seems quite rigid and embedded in the structure of the companies 1, 4 and 7, as interviewees 1, 4 and 7 agreed on the importance of task performance rules. Interviewee 4 stated “The need for basic functions, organizational matters, you need some structure that you don’t need spend so much time, but some similar things they should just work. Like going to car in the mornings, the car should just start. Otherwise you would spend a lot of time with that.”

As represented with the example of the car, it seems that problems, which are occurring in extremely similar ways, can be described as structured problems (Ivancevich et al., 1989, p. 98; Gibson et al., 1973, p 572; Perrow, 1967, p. 204). The company can build up routines which help to tackle these problems (Kreitner & Kinicki, 1992, p. 552) and as interviewee 4’s statement implies, this has an impact on the daily efficiency (Ivancevich et al., 1989, p. 99) which in turn addresses the decision making. Therefore, that task execution in companies 1, 4 and 7 are handled by programmed decisions.

The reason that task execution in companies 1, 4 and 7 is set and therefore subject to programmed decision making, seems to be two-sided. On the one hand, the demand for programmed decisions lies in the need for efficiency (Ivancevich et al., 1989, p. 99). In case of interviewee 1 and 7 the task execution decisions are programmed, as both interviewees emphasized the importance of efficiency in the execution of tasks. Interviewee 7 stated “Well, when I came in here it was a very closed group. Not many
people were thinking about innovations [...] They were just focused on the delivery.” This statement underlines that a high focus on efficiency leads to a neglect of innovations. Moreover, interviewee 1 also stressed the importance of efficiency in the execution of tasks and explained it with the high time pressure the team is working under. On the other hand, it is important to consider the specific situation the company faces as the company has been growing from only 5 to 18 employees, which led to a demand for more structural procedures, more precisely task execution rules, as interviewee 4's statement clearly showed “I think we would have integrated some more structure [...] because we were a few people and now we are three times more and that sets some specific demands on the organization and structure.” It seems that the salient aspect of efficiency is highly connected to programmed decisions as they provide effective ways when it comes to decisions (Ivancevich et al., 1989, p. 99) based on the fact they become routines (Ivancevich et al., 1989, p. 98; Gibson et al., 1973, p 572; Perrow, 1967, p. 204). Since two underlying different reasons can be covered by the theory, it seems that the process of getting to the result and adhering to the set criteria such as the delivery date is the most important.

Influence of Task Performance Rules on Decision Making

Task performance rules cannot be said to have solely a positive or negative impact on decision making. We discovered that structure can limit decision making in case companies are willing and able to accept risks. Such companies primarily focus on the result, rather than on efficiency as they have a solid financial base. Structure would influence the decision making of managers in such companies which emphasize the result a negative sense as it would shift the focus to the efficiency rather than the result. However, the results also showed that task performance rules can have a positive influence on decision making in case companies are rather efficiency seeking throughout the innovation process instead of putting emphasis on the result.

6.4.2 Continuing Reports and Records

Existing Continuing Reports and Records

In our interviews, it was reported by all seven interviewees that they utilize reports and records. Overall we could see that time reporting systems were highlighted by the interviewees, as they were commonly used by all of them. Interviewee 1 explained the need for group reports he uses “It is very important to have group reports and stuff in order to make decisions.” Interviewee 2 is provided with “[...] a general overview to see what is been working on and how much we spend on resources.” Interviewee 3 uses such reporting systems that address administration and documents which support his understanding of the progress made and “[...] how much it does have cost me”. However, reports were also described to be a weekly subject “Then I use structure in order to keep track of things” (Interviewee 5). Furthermore interviewees 6 and 7 use reports to identify which problems in the innovation process exist as they allow to keep track on the happenings and also to see what has been done in the teams. Moreover, we noticed that reporting systems were used specifically in relation to financial aspects by interviewee 2, 3 and 7, as interviewee 7 mentioned that “The important financial information is very critical and very inflexible.” Furthermore, we realized that some interviewees tend to use reporting systems on a regular basis, more precisely weekly (Interviewee 5) or even daily basis (Interviewees 1, 3 & 7).

This finding shows that reporting systems seem to serve as a substantial foundation in order to make decisions, more precisely, such decisions that are related to financial feasibility as well to process and staff related feasibility. All of these different types of
reporting systems have the purpose described in the theoretical framework, such as controlling important aspects in the business or making forecasts (Cyert & March, 1994, p. 125). Especially interviewee 1 and 7 emphasized the importance of reports for making decisions on critical topics such as financial aspects. Moreover, we see that all interviewees except of interviewee 4 use reporting systems in order to understand on what employees have been working and more precisely, to see the progress of their projects. This is highly connected to the theoretical base for standard operating procedures, as Cyert and March (1994, p. 122) mention reports as a way to keep track on effective aspects of the organizational operations. However, apart from these functions, we noticed that reporting systems also serve as a mean to prioritize actions as described by interviewees 3 and 5.

Non-Programmed Continuing Reports and Records
Although all interviewees seems to make use of reporting systems, the degree to which reports are utilized differs between the interviewees.

Overall, we noticed that company 2 and 4 are using reporting systems in a quite flexible manner. Although interviewee 2 expressed the importance of reports, he also highlighted that reporting systems “[…] should not be rigid or disturbing.” Thus, we noticed that the handling of reporting system equals the rule of thumb (Interviewees 2 and 4). To be more exact, we realized that the actual way of handling the reporting systems, which allows individual adjustments equals a broad way of solving problems and therefore harmonizes with non-programmed decisions. (Simon, 1977, cited in: Kreitner & Kinicki, 1992, p. 552; Ivancevich & Matteson, 1990, p. 516).

Programmed Continuing Reports and Records
We realized that reporting systems are an integrative part of the structure of companies 1, 3, 5, 6 and 7, as all make use of reporting systems. Interviewees 1, 3, 5, 6 and 7 agreed on the importance of reports for making decisions. Interviewees 3, 6 and 7 also highlighted the important role of reports in order to keep track on and control the resources. Despite some flexibility (Interviewees 1, 3 & 6), the reporting systems are used in strict repetitive ways (Interviewees 3, 5 & 7). Interviewee 3 focuses even on a daily basis on the reports, which require to be filled with data. Since we see the described procedures as set norms in the companies, it seems that this is highly connected to the theory presented on programmed decisions (Ivancevich et al., 1989, p. 98). As explained in the theoretical framework, programmed decisions are the result of routinized and regular procedures (Kreitner & Kinicki, 1992, p. 552) which are created in order to deal with problems, as for instance with problems related to resources (Perrow, 1967, p. 204; Ivancevich et al., 1989, p. 98; Gibson et al., 1973, p 572).

Influence of Continuing Reports and Records on Decision Making
The findings revealed that continuing reports and records are essential in order to keep track on and control innovation processes, as the examination has shown, that these are largely pursued in parallel. Moreover, set procedures in terms of reporting systems are important as they directly facilitate innovation managers’ decision making when prioritizations have to be made.

6.4.3 Information-handling Rules
Existing Information-handling Rules
In general, we noticed that all companies have some kind of information-handling rules. Interviewee 2 and 7 described the information-handling rules as rather formal, involving
fixed regular meetings and the documentation specific information. This documentation either implies a newsletter (Interviewee 7) or it includes what has been communicated during the fixed meetings (Interviewee 2). All other interviewees however, described the way information is transmitted as rather informal. Although interviewees 1, 3, 4, 5 and 6 also mentioned regular fixed meetings and partly also documentation of information, all of these interviewees also mentioned additional informal ways of information handling. As an informal way of information transmission, interviewee 5 stated “Like putting things on the whiteboard or paper instead of writing it on the computer [...] helps us to move faster.” Interviewee 6 noted “We have the stand-up meeting in the morning and we have the board with the yellow post-it”.

All of these information transmission methods are in accordance with the theoretical base on information handling rules described in the theoretical framework (Cyert & March, 1994, p. 123). Particularly, interviewees 2 and 7 underlined the importance of these fixed methods for information transmission to be kept informed. Interviewee 2 stated “Information is based on weekly meetings for the whole company [...] I use these to get all other information about the progress of the project and the status of the financial.” In contrast, interviewee 1 and 4 emphasized the need for the possibility to have short, unplanned meetings in between, whenever discussion is needed. We believe that this contrast is in line with the theoretical background on information-handling rules, implying that information handling in small companies is informal compared to bigger firms, where information is handled in a formal way (Cyert & March, 1994, pp. 127-128). More specifically, companies 1 and 4 are smaller companies with 8 and 18 employees, compared to company 2 and 7, which have 34 and 60 employees. It can be assumed that the contrast between both regarding the degree of formality in information handling can be ascribed to the size of the respective company. In fact, interviewee 1 himself even related the informal information handling to the size of the company as he stated “We also meet in between when we have to discuss something. We can do that. We are a small team.” Therefore, in line with the theoretical framework on information-handling rules, there seems to be a tendency that the smaller the company is, the more likely informal exchange of information is. However, one aspect we have also noticed is that the interviewees 1 and 4 are seeking for a culture in the company in which employees are used to provide information spontaneously and immediately, as ad hoc problems in innovations seem to be likely. Thus, this seems to include a time aspect which is important to consider when talking about information, however, this aspect is not covered by the theoretical background. Theory emphasizes that relevant information should reach the right place and person (Cyert & March, 1994, p. 123). In addition to that we perceived the pace and timing of information transmission in innovations are crucial which is also underlined by the experience from interviewee 7 who stated that “We find the problem at the customer [...] and we need to be able to respond to that request pretty quickly, otherwise it is gone.”

**Non-Programmed Information-handling Rules**

Although theory about information-handling rules describes an informality in information sharing, apart from being informal, we realized that some information sharing ways can be even very unconventional and creative. Examples for this were given by interviewees 5 and 6 who use whiteboards and post-it’s in order to share information in effective and fast ways. Additionally, interviewee 5 pointed out that this ways enhance the speed. This unconventional and creative way of dealing with information indicates non-programmed decisions, as these are characterized by unusual ways of making decisions (Simon, 1977,
cited in: Kreitner & Kinicki, 1992, p. 552). The need for fast information exchange leads to interviewee 5 and 6 implementing uncommon ideas in order to gain quick respond.

**Programmed Information-handling Rules**

Interviewees 2 and 7 described very set and repetitive methods in order to share information. The information exchange in these companies seems to consequently follow the quite formal appearing dates and thus represent repetitive ways (Ivancevich et al., 1989, p. 98) of dealing with information. Furthermore, we could not detect that great exceptions from these rules are made or that deviations from this procedure would be part of the company’s culture. The regulated way of information exchange makes the information flow within the company transparent and also predictable, as employees know when and how information can be obtained or needs to be provided. Therefore, we view that this way of information handling is subject to programmed decisions, as these type of decisions occur in regular and repetitive ways (Ivancevich et al., 1989, p. 98) which makes it more foreseeable (Simon, 1958 cited in: Cray et al., 1994, p. 192). We see reasons for this lying in the fact of a special underlying situation, more precisely, interviewee 7 joined the company only 6 months ago, which leads us to the assumption that a programmed handling of information flow can be helpful in order to gather all information needed since this is handled as a routine. The other exception from non-programmed handling of the transmission of information seems not to entail we could not detect s special underlying factor causing this.

**Influence of Information-handling Rules on Decision Making**

Our findings clearly showed that structure in terms of information handling rules has to be very flexible in order to enable decisions to be made quickly. Therefore, we discovered that set procedures in information handling influence the decision making of innovation managers in a negative sense. The companies found a way to handle this SOP in a flexible way without set procedures in decision making.

**6.4.4 Plans**

**Existing Plans**

All interviewees expressed that they have plans within their organizations. While only interviewee 5 stated “*Because it is very complex, you can’t have everything planned ahead.*”, interviewees 1, 2, 3, 4, 6, and 7 commonly use proper and different plans in their innovation processes. We experienced that the plans mentioned most often were related to financial aspects, as interviewees 2, 4, 6 and 7 mentioned to have fixed budgets. Further, we detected that also time plans (interviewees 2, 3 and 6) and project plans (interviewees 3, 4 and 6) were common in order to see the progress of the projects. Interviewee 2 explained the time plan as to “*[] have kind of a road map with time plans*”. We think that this explanation is due to the many actions which need to be handled in innovation processes and therefore by this the need for plans in order to keep track seems to get comprehensible in innovations. Interviewee 3 highlighted that the project plan entails several steps and checkpoints which enable to see progress. Interviewee 4 expresses “*I need plans, i need to have that overview in order to be able to make decisions.*” This implies that plans support decision making that lead into right directions.

In turn, the statement “*Wrong decisions would cause customers that will not be as satisfied as we want, because we don’t follow the time schedule then and everything is connected.*” by interviewee 4 can be a sign, that the actions in the innovation process are highly interrelated and that plans make it easier to meet the delivery date. In line with that finding, some plans are not only a support for the organizations, but serve also as a security in order to meet the customer’s trust.
(Interviewees 1 & 4). However, we perceived that an essential reason for the organization to implement and follow plans is the relationship to customers. As companies 1, 2, 3, 4, 6 and 7 work on customer-driven innovations, plans contribute to setting the ground for a trustful and solid relationship between the organization and their customers, as they allow the organization to gain customers trust and loyalty by adhering to the set plans and thus, meeting their expectations and proving the organizational reliability. Therefore, we think that theory on plans should be extended by including the aspect of customer trust. Considering that, in general, plans facilitate decision making, we see a correlation with the theoretical framework which holds that plans are helpful in evaluating the feasibility of activities (Cyert & March, 1994, pp. 131-132). The finding that financial and time plans were often utilized can be explained by its use, as these plans directly serve to evaluate the feasibility and the allocation of resources, which is also usually a subject to project plans (Cyert & March, 1994, p. 123).

Non-programmed Plans
In terms of plans, only interviewee 5 reflected upon the complexity of innovation processes, which he thinks is the reason that planning is not always possible. Furthermore, the interviewee explained “We make a document and […] we can just throw it away as soon as we get started doing the product. Because then we find completely different ways.” This led us to the assumption that the underlying problem is unstructured (Gibson et al., 1973, p. 574), which calls for non-programmed decisions in order to address the complexity. Therefore, interviewee 5 emphasizes the need to work through the process step by step in order to see where it leads to. This is a way of utilizing a traditional technique in non-programmed decisions like the rule of thumb and is needed as no predetermined procedure exists (Simon, 1977, cited in: Kreitner & Kinicki, 1992, p. 552; Ivancevich & Matteson, 1990, p. 516). We think that interviewee 5 in this case of plans is outstanding because a radical innovation in the past pushed organization 5 to be a market leader. Thus, the numerous benefits resulting from this allow interviewee 5 to act in this flexible manner when it comes to plans. Overall, when comparing to the other interviewees, we perceived this as an exception.

Programmed Plans
The explicit majority of interviewees clearly highlights the importance of plans, more precisely plans related to financial and time aspects as well as project plans. Such plans set the frame for all activities by specifying the feasibility and providing a guideline for the implementation of the innovation process. This makes the outcome of the process much more predictable and also transparent (Simon, 1958 cited in: Cray et al., 1994, p. 192). Therefore, interviewees 1, 2, 3, 4, 6 and 7 know exactly what actions to undertake in this process, as the decisions are already set. Interviewee 4 stated “You have a budget and you need to follow that, when you go outside, you need to communicate that and that is quite strictly regulated. These kind of things I have to follow.” The effect of simplification of the process and making it more transparent and predictable indicates that the planning process of companies 1, 2, 3, 4, 6 and 7 is dealt with by programmed decisions. Programmed decisions occur on a regular base as they deal with regular arising problems. The set way of dealing with such problems makes the process of decision making highly predictable (Simon, 1958 cited in: Cray et al., 1994, p. 192), just as described by interviewee 5. Thus, when taking into consideration that the examined companies work on innovations that are mainly customer driven, we perceive that overall plans are highly demanded in innovation processes in order to provide a set handling of the process allowing to successfully generate innovations that lead to customer satisfaction.
Influence of Plans on Decision Making

Our findings clearly showed that structure in terms of information handling rules has to be very flexible in order to enable decisions to be made quickly. Therefore, we discovered that set procedures in information handling influence the decision making of innovation managers in a negative sense. The companies found a way to handle this SOP in a flexible way without set procedures in decision making.

Table 2 serves as a summarized overview of the four SOPs in the examined companies and the respective decision type presented in the analysis.

<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Standard Operating Procedures (Cyert &amp; March, 1994)</th>
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<tbody>
<tr>
<td></td>
<td>Task Performance Rules</td>
</tr>
<tr>
<td>Interviewee 1</td>
<td>P</td>
</tr>
<tr>
<td>Interviewee 2</td>
<td>N</td>
</tr>
<tr>
<td>Interviewee 3</td>
<td>N</td>
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<tr>
<td>Interviewee 4</td>
<td>P</td>
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<tr>
<td>Interviewee 5</td>
<td>N</td>
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<tr>
<td>Interviewee 6</td>
<td>N</td>
</tr>
<tr>
<td>Interviewee 7</td>
<td>P</td>
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</tbody>
</table>

P = Programmed     NP = Non-Programmed

Table 2: Analysis of Standard Operating Procedures

6.5 Creativity

In order to examine the scope for decision making regarding creativity, we use the categories of Amabile (1998) suggested for the enhancement of creativity in business settings. We will analyze one category after another in order to detect whether or not the interviewee has the possibility to contribute to the element of creativity when balancing creativity and structure in innovation processes.

6.5.1 Challenge

In each of our interviews, we noticed that the interviewees have the possibility to assign the tasks preferable to the employees according their knowledge and skills in order to challenge them as suggested by Amabile (1998, p. 81). For instance, interviewee 5 stated that “I ask the team who wants to do what. Or I decide in a rational way and assign tasks to who is best at the specific task”. Similar to this, interviewee 3 argued that he considers the experience of employees when assigning tasks. Moreover, interviewee 4 explained that “I need to know my co-workers, to know at what they are best at and you want to know the journey that you have from A to B and you need to set up the best team for that journey and for that you need to know what their competencies are, at what they are...
strong and what are their less strong sides.” We see that this is also in line with the challenge category of Amabile (1998, p. 81) implying that managers should know the individual employee as well as the task. However, interviewee 6 had a contrary view on this stating that “So right now, what I am trying to do with the new employees is to put them into things they have never seen before and take that from senior developer into junior developer. [...] Taking it away from a senior, to get them into new stuff and get them into more creativity and being more innovative [...]”

The interviewee argues that by assigning tasks to employees which do not match their knowledge, their creative thinking skills will be enhanced. By doing this, but still providing support to the employee in case help is needed, the employee gets challenged and his creative thinking is stimulated. This is partly in line with the category of Amabile (1998, p. 81), as it also implies to challenge the employee. However, referring to the interviewee 6, this challenge might not always be reached by matching knowledge to tasks but by doing the exact opposite.

6.5.2 Freedom
Except of interviewee 1, all interviewees were able and willing to provide employees with freedom and autonomy regarding the way tasks are carried out. As suggested by Amabile (1998, pp. 81-82), interviewees 2, 3, 4, 5, 6 and 7 provide employees with the objective of the task, but do not specify ways for achieving it. Interviewee 5 for instance stated “I kind of look upon it from the black box perspective: You have input and you have output, and that is defined. Whatever they do inside [...] I don’t care [...]”. Interviewee 1 however, explained that usually solutions are found together. He explained that employees have only freedom “in a certain way”, as the toolbox used largely determines “what and how we develop and how the system works”. Although he stated “We have to find a middle way often.” in relation to the programmed decisions, we perceived in terms of closely related task performance rules, the freedom through the toolbox as extremely limited. We see that the reason for this lies in that the interviewee 1 sees efficiency as being more important than constant creative contributions. This assumption is underlined by the statement “I think that we can’t always put in new ideas, change things. We have to have a stable development plan to work with.” (Interviewee 1). Apart from the exceptional handling of interviewee 1, we see that all other interviewees evaluate the freedom as very important and worth to consider as this was highly connected to creativity. More precisely, creativity is enhanced by the freedom and therefore directly relates to innovations as interviewee 2 mentioned “It is up to the group to figure out how and what they should actually do in order to create innovation.”. Thus, this category can be seen as especially important in innovations as interviewees directly connect this to the creation of an innovation.

6.5.3 Work-group Features
We realized that interviewees 2-7 pay attention to group dynamics when assembling the teams in order to raise creative contributions. Two interviewees (Interviewee 4 & 2) elaborate more detailed on the synergies and their result. Interviewee 4 described that the innovation processes benefit from a variety of competencies as this leads to faster undertakings in innovation processes. Similar to that, interviewee 2 explained “It would be a problem if I would not be free to choose the groups in a way I need it, because innovations needs people being put together. [...] If you want to have a focus on one area, you need to mix from certain competencies and areas and then put them together. That is when you have created innovation.”
This procedure is mentioned and supported by Amabile (1998, pp. 82-83) as the category work-group features, which implies that different skills and knowledge in teams lead to new creative ideas. However, the interviewee 2 goes even a step further when he said that different competencies do not only have an impact on creativity, but even on innovations as such. Therefore, when considering the statement of interviewee 2, this suggestion by Amabile seems also to serve as a key driver in innovations. However, we noticed that this category is not relevant in case of interviewee 1, as tasks in company 1 are carried out individually rather than collectively. Hence, work-group features do not apply to company 1.

6.5.4 Supervisory Encouragement

All interviewees jointly agreed on the importance of showing appreciation for the creative contributions employees made. Interviewee 6 expressed the importance by stating “I can’t come up with all the ideas. Therefore it is up to me to show everybody that we have a creative environment and people get credit for what they do.” In line with the suggestion of Amabile (1998, pp. 83-84), the interviewees have the possibility to give short-term response by providing feedback or the like. For instance, interviewee 3 argued “the most important is that I give the people that are doing a good job a good appreciation and you show it and say “that was very good”.” Besides, interviewee 4 argued that he shows appreciation by providing an assessment on creative ideas and adding his own knowledge to it. He stated “Sometimes if I hear ideas [...] I try to think around and also to contribute with what I know. Add another aspect of it and it could become that problem solving.”

6.5.5 Organizational Support

It was noticeable that all organizations support creative contributions of their employees when showing different forms of reward or creating such an environment which encourages creativity (Amabile, 1998, p. 84). Some companies show appreciation by initiating trips for the teams or giving out lunch or cakes (Interviewee 1, 4, 5 & 7), others change the working environment into a less formal environment by moving to a bar for example. This undertaking is not specifically mentioned in such detail by Amabile (1998). However, we think that leaving the work setting, physically and mentally, might lead to a clearer view on work-related topics as the working environment might create a feeling of pressure on employees. Furthermore, as suggested by Amabile (1998, p. 84), some companies show honor and gratitude for contributions made by benefiting directly the person who is successfully creative as interviewee 4 explains stated “We have that possibility, if you come up with an innovation, that the idea, the patent, belongs then also to the inventor and not only the company. This is also our motivator for innovation.” Similar to that interviewee 6 argued “Not stealing people’s ideas, the one that came up with an idea, is the one who gets the benefit for it.”. Therefore, all interviewees have the possibility to enhance creativity within the frame the organization provides support towards creativity.

Our findings clearly revealed that overall, the structure including the 4 SOPs does not influence decision making of innovation managers regarding creativity. In fact, innovation managers are provided with a scope for decision making which allows to enhance creativity according to the categories mentioned by Amabile (1998). Furthermore, we discovered that the scope even allows the innovation manager to undertake actions in the way he wants. This result clearly shows that regardless the
structure, innovation managers are completely free in making decisions regarding creativity.

Table 3 serves as a summarized overview of the creativity categories implemented in the examined companies.

<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Creativity Categories (Amabile, 1998)</th>
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<tbody>
<tr>
<td></td>
<td>Challenge</td>
</tr>
<tr>
<td>Interviewee 1</td>
<td>✓</td>
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<tr>
<td>Interviewee 2</td>
<td>✓</td>
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<tr>
<td>Interviewee 3</td>
<td>✓</td>
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<td>Interviewee 4</td>
<td>✓</td>
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<tr>
<td>Interviewee 5</td>
<td>✓</td>
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<tr>
<td>Interviewee 6</td>
<td>✓</td>
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<tr>
<td>Interviewee 7</td>
<td>✓</td>
</tr>
</tbody>
</table>

*Table 3: Analysis of Creativity Categories*
7 CONCLUSIONS AND DISCUSSION

7.1 Answering the Research Question

Innovations allow organizational survival and growth and are therefore important for companies. However, the creation of innovations is regarded as a complex phenomenon which holds numerous challenges for companies and more precisely for the innovation manager in charge of the operational level, dealing with decision on a daily basis. Besides the general complexity connected to many different actions within the innovation process, a main challenge was presented by the two important elements needed in innovation processes: creativity and structure. When we were looking at the management of innovations, these both elements were described as contradictory and needed at the same time. However, while literature has largely dealt with this contradictory challenge on the strategic level, the operational level where a simultaneous management is needed, was not particularly examined. In order to fill this gap, it is important to consider structure not only as an element of the balancing act but also as an embedded part of organizations providing stability but also prescribing ways in which decisions are made. In order to gain a deeper understanding on the balancing act of the contradictory elements of creativity and structure in innovations processes, it is important to consider the influence structure has on the decision making of innovation managers. Therefore, this thesis aimed to answer the following research question:

How does the existing structure in organizations influence decision making of innovation managers when balancing structure and creativity in innovation processes?

A main finding of this thesis is that structure is an essential lever for creativity. We discovered that structure influences decisions in a good way as standard operating procedures like reporting systems and plans support the innovation manager on the operational level when making daily decisions. This reveals that some structure is specifically demanded in innovations. Due to the fact that these procedures are handled by programmed decisions, the innovation manager is not forced to spend much time and energy on actively dealing with such decisions. Consequently, programmed decisions take the work off the innovation managers’ hands which in sum raises the efficiency of innovation processes. Moreover, the programmed decisions allow the innovation manager to focus on actions which aim to enhance creativity. Thus, we discovered that structure leads to efficiency in the innovation process and at the same time serves as an essential catalyst for creativity.

The findings of this thesis revealed that structure (SOPs) does not influences the scope of innovation managers when making decisions on creativity and thus that there is no negative influence. In contrast, our main finding of the thesis shows that different from the critical view in literature, structure is a booster for creativity when looking upon innovation process on the operational level. Therefore, the theory differs from our findings as structure does not influence creativity in a way that it hinders the generation of innovation.

Our findings revealed that both, creativity and structure are actually required in innovation processes, and moreover they revealed that structure and creativity are closely interrelated. We could see that structure is important for creativity as it serves in innovation as lever to facilitate and enhance creativity. Hence, this thesis revealed that
structure and creativity do not exclude each other as theory states. Literature also states that putting an emphasis on one of these elements naturally minimizes the other element. However, we discovered the opposite. The fact that both are used simultaneously enables synergies in the innovation process, which leads to the revealing that on an operational level where every day decisions on creativity and structure are made, structure and creativity does not present a contradictory challenge to innovation managers.

**7.2 Theoretical Contributions**

As part of the challenges in innovation management we particularly contributed to the element of structure as we pointed out which set structural procedures are beneficial in innovation processes. By this, we add and deepen knowledge when starting at theories in innovations, which have been looking at structure in a broader sense but did not distinguish between specific procedures which can be explained by the lack of examinations within the operational actions.

Based on the positive influence structure largely has on innovation processes of the examined companies, our findings clearly show that creativity and structure on the operational level are not contradictory and thus cannot be seen as presenting a contradictory challenge for innovation managers as stated by theory on challenges in innovation management. Our investigation was conducted on an operational level which shed light on everyday decisions. Theories, which argue that enhancing creativity is the result of de-emphasized structures and that the reinforcement of structure reduces creativity (Freeman & Engel, 2007, p. 95), did not focus on this specific level. Therefore, we extended the existing theories which rather address the strategic level. In addition to that, we shed new light on the relation of structure and creativity in innovation processes as the results have shown that structure is complementary to creativity rather than an opposing element.

When looking at the broader level of implications, it becomes evident that we also extended existing theories on innovation management and innovations in general. Literature (Trott, 2012, p. 28; Pavitt, 2005, p. 101) has highlighted the complexities which are inherent in the generation of innovations and consequently also in the management of innovations. We contributed to theories on innovation management as our findings help to resolve this complexity attached to the generation of innovation by shedding light on how the essential elements of structure and creativity need to be managed in order to exhaust all possibilities and enhance the overall innovation capabilities.

**7.3 Practical Implications**

Besides the theoretical contributions made, our study also makes practical contributions to the studied companies as well as to companies and innovation managers in general as well as to society as such. Considering that the importance for innovations increases steadily and the initial starting point that managers can face many challenges in innovation processes, we believe that the knowledge we have created can improve companies’ ways of dealing with the two examined elements. As a result, well-managed creativity and structure in the short-term can lead to improved or increased numbers of innovations in organizations in the long term.

To start, we believe we have contributed positively to the balancing act in the examined companies by revealing the conditions under which the interviewees make decisions when balancing creativity and structure. Having illustrated this, we can propose clear
implications for the studied companies in order for them to create even better conditions for decision making and thus, improve the balancing of creativity and structure in innovation processes.

In order to create a synergy resulting from the interlinkage of structure and creativity, we propose innovating companies to have set procedures and programmed decisions for some aspects of the structure. More precisely, we suggest companies to make reports as well as plans subject to programmed decisions in order to build supportive procedures which allow the innovation manager to focus on other important aspects in the innovation process. On the contrary, we recommend companies to provide innovation managers the freedom to deal with information handling and also task performance the way they want; thus, making such procedures subject to non-programmed decisions. This constellation of programmed and non-programmed decisions serves as a catalyst for creativity in innovation processes.

When investigating the balancing act, we focused on established companies in order to reveal the influence an embedded structure has on decision making and the balancing act. This enabled us to find that structure is a complementary aspect for the enhancement of creativity, as it supports the manager by taking work off his hands, so that he can focus on the enhancement of creativity. This finding implies implications for young companies, such as startups. Startups have highly agile and creative working environments and do not have embedded structural procedures like established companies have. As a result of our findings, we see a benefit for startups to foster structural procedures. To promote structure would benefit them in two ways. While structure raises efficiency in the innovation process it also raises the enhancement of creativity by getting an order and thus, avoiding too much chaos when dealing with flourishing ideas. This is highly beneficial, as creative ideas are only valuable when being realized through set structures.

Our findings should encourage companies to perceive the balancing of structure and creativity as less challenging, as the perceptions of a challenge already implies to some extent that structure is an obstacle to creativity and thus to innovations. Rather, pursuing the described structural procedures instead of trying to limit structure will make innovation generation easier, as companies then can make use of the synergies which are released by structure. In doing so, the generation of innovations in companies will be enhanced and thus, would directly benefit users and therefore the society by the value generated through innovations.

7.4 Future Research
This section aims to imply our research as point of departure in order to stimulate further research for new and deeper orientation. The investigation led to the identification of more relevant aspects which were not included in the scope of our thesis. However, further research would allow a more prosperous understanding in terms of innovation management and the elements creativity and structure.

In our thesis we aimed to examine how the existing structure, as an internal aspect, in organizations influences decision making of innovation managers when balancing structure and creativity in innovation processes. Through our examination it got evident that also external aspects can influence the decision making of innovation managers when balancing structure and creativity in innovation processes. Therefore, further research should focus on the examination of the influence a customer or a competitor can have on
companies, and more precisely on the decision making of an innovation manager, as these are also directly and indirectly involved in the innovation process. Based on that, a more extensive research on the influence of both, internal and external aspects simultaneously would be of relevance.

Moreover, when looking upon the structure in organizations it would be valuable to include hierarchies into the examination as this would enable to gain a deeper understanding on decision making taking place within different levels as this can also influence the elements creativity and structure. We assume that including hierarchies would furthermore result in the examination of bigger companies.

Due to the methodological choices taken in order to delimitate the research, we were not able to conduct a longitudinal study in order to follow an innovation manager and examine the balancing act throughout the whole process. Therefore, future research should examine the balancing act regarding the different periods in the innovation process, which we were only underlying in this thesis. We expect a concentration of the different phases to contribute to the knowledge of innovations as it would allow to draw conclusions on the importance of the elements of creativity and structure in the phases individually.

7.5 Truth Criteria

In this section we aim to present information needed in order to evaluate the quality of our research. Thus, in order to achieve and evaluate quality of research, reliability and validity are commonly used terms in quantitative research (Bryman & Bell, 2011, p. 394). However, these terms cannot be equally applied to qualitative research and require adjustments when looking upon qualitative research (Flick, 2006, 367-368; Bryman & Bell, 2011, p. 394; Mason, 2005, 38-39). Therefore Lincoln & Guba (1985, cited in Bryman & Bell, 2011, p 395) and Guba & Lincoln (1994, cited in Bryman & Bell, 2011, p. 395) created an alternative way, which allows to achieve and evaluate quality in qualitative research. Thus, we will look upon the criteria of trustworthiness to which the authors refer as credibility, transferability, dependability and confirmability.

7.5.1 Credibility

In order to reach acceptance of others, it is needed to secure credibility in terms of findings. Therefore, it is first necessary to undertake research which meets good practice and second, to provide the ones who were part of the qualitative study with the findings. This second aspect allows to express if the social was understood correctly by the researcher. (Bryman & Bell, 2011, p. 396) In order to build up trustworthiness by reaching a good level of credibility, we made sure that the set dates for the interviews allowed both of us to participate and thus to conduct the interview together as this reduced the risk of misinterpretations. Moreover, we conducted face-to-face interviews whenever it was possible and in agreement with the interviewees. In addition, during all interviews we summarized some of the given answers of each interviewee in order to ask if we understood the response correctly. This procedure can be seen as respondent validation (Bryman & Bell, 2011, p. 396).

7.5.2 Transferability

Lincoln & Guba (1986, p. 19) refer to transferability as thick descriptive data, which provides others with data. They state that this data aims to enable others to make their own judgements and to transfer the findings, partly or as a whole, to some other places.
In order to ensure that the readers of our thesis have the possibility to make their own judgements and interpretations, we conveyed the empirical material we have collected in a separate empirical chapter. Within this chapter (chapter 4), we present raw material, which we gathered through the interviews we have conducted. We aimed to show rich material, which allows to understand the context and interlinkages within one company. The choice of empirical material is based on the most representative citations made by the interviewees and we aimed to present the empirical material as authentic and close to the original as possible. Furthermore, we enabled not only transferability for our readers, but also for other researchers by describing in detail how we conducted our research and how we proceeded. For this reason, we show off the interview guide in the appendix. Although replication in qualitative research is not without obstacles, we provided information which allows us to deliver as much transparency as possible.

7.5.3 Dependability
Guba & Lincoln (1994, cited in Bryman & Bell, 2011, p. 398) perceive dependability in qualitative research as similar to reliability in quantitative research. Thus, it is suggested to consider an auditing approach in order to achieve quality in this aspect of trustworthiness. Therefore, we followed such an auditing approach as we wanted to provide as many information as possible to show off that we were concerned with consistency throughout our thesis. Therefore, we kept records as suggested by Guba & Lincoln (1994, cited in Bryman & Bell, 2011, p. 398) which allow to understand the consistency we kept, when following the records we provide through our thesis. Therefore, we provide information about what the reader can expect in each chapter as we give detailed information of what we are going to present. Our descriptions allow the reader to follow our entire procedures in a chronological order. After we have presented our preconceptions, which are underlying in our work and enabling the foundation of our examination, we have delivered clear explanations about our interviews and how we conducted them. Afterwards, we have been focusing on a meticulously description of our empirical material, which processing we have also explained more detailed in our practical methodology party. Based on that, we have described again very detailed how we proceeded with our empirical material in order to get to our analysis. All of the mentioned progress of our thesis has been described as exactly as possible.

7.5.4 Confirmability
As we mentioned before, in research it is not possible to keep complete objectivity. However confirmability holds that it is possible for researcher to demonstrate that their actions comply with good faith. (Bryman & Bell, 2011, p. 398) As stated earlier, we believe that our preconceptions might lead to subjectivity, but not to bias. However, we paid attention to be as objective as possible as this allows us to be attentive to numerous aspects. This objectivity was also subject to the conducted interviews as we avoided any kind of leading questions. Due to this, our interview guide was rich and therefore follow-up questions were rather an exception, which as a result can raise the confirmability of our research.
References


Appendices

Appendix 1 – Interview Guide

Demographic Questions:
1. Can you tell us something about your organization and your role in it?
2. What is your position within the organization?
3. What kind of innovations do you create and how?
4. How big is/are the innovation team(s) you are responsible? For how many employees are you in charge?

Management of Innovations:
5. Could you please briefly explain the innovation process in your company?
6. How would you describe your role as a manager in the innovation process?
7. What do you think are your main tasks within the innovation process? And which of these tasks do you consider to be the most important?
8. Do you face different challenges in innovation processes compared to general management processes?
9. How would you describe the general conditions you are working under?

Structure
10. How do you ensure that your team executes tasks in the same way?
11. How rigid or flexible are the reporting systems?
12. How is the information flow in the organization organized?
13. How free are you in allocating resources?

Creativity
14. How are the tasks defined and assigned?
15. How much freedom do your employees have regarding the execution of their tasks?
16. How free are you in the constellation of your teams?
17. Which possibilities do you have to provide support and show appreciation for actions/suggestions?
18. How do you try to stimulate your employees in order to enhance their contributions?
19. How much do you focus in general on the enhancement of creativity in your daily business?

Decision making
20. How do you think structure influences the decisions you make regarding the innovation process?
21. Would additional structures help or hinder you in managing the innovation process? How?
22. How do you think the need for creativity influences decisions you make regarding the innovation process?
23. What factors do you take into consideration in your decisions when new or unexpected situations come up or deviations from plans arise?
Dear Sir or Madam,

We are two students enrolled in a Master program in Management at the Umeå School of Business and Economics and working on our master thesis about “Decision making in Innovation Management”. The purpose of our thesis is to discover how the level of structure influences managerial decision making in innovations when simultaneous management of creativity and structure in the innovation processes is needed. For this, we aim to conduct interviews with managers being directly responsible for the innovation process (for instance including idea generation, development and implementation). With our thesis we aim to contribute to knowledge about decision making in management of innovation and the successful development of innovations.

We would be very grateful if you would take part in our investigation as your contribution would be of high value for our research. The interview, which could be conducted in personal, via skype or phone, would last approximately 30 to 40 minutes. We pay attention to this time frame as we are aware of the value of your time. Moreover, we assure to strictly follow all guidelines regarding anonymity and ethical considerations.

Thank you in advance for your time and interest. If you have questions, please don’t hesitate to contact us. We are looking forward to hearing from you.

Kind regards,
Regina Wist & Selin Kirli

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