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NORWEGIAN SCHOOL OF HOTEL MANAGEMENT

MASTER'S THESIS

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TITLE: Climate for Innovation – The Case of TINE Innovasjon og Marked

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Abstract

The purpose of this study was to explore the concept of climate for innovation in a mature organization: TINE Innovasjon og Marked (TINE I&M). The study is funded by Virkemidler for Regional Innovasjon (VRI), and is written in cooperation with TINE I&M. A qualitative study consisting of in-depth interviews with employees from TINE I&M were conducted to identify areas within the organizational climate for innovation that could benefit from improvement. The following areas where identified; allocation of time, vision, boundaries of radical and incremental innovation, the innovation process, communication and collaboration, and silo-mentality and intra-organizational provincialism. This study will firstly present the theoretical framework for the study, before introducing the methods used for the study. A combined findings and discussion section will explore the areas of improvement identified during the interviews, discussing why they come about, why it is important to improve it, and give suggestions on how TINE I&M can improve or avoid the identified areas.

Key Words: Innovation, Climate, Culture, Vision, Allocation of Time, Radical Innovation, Incremental Innovation, Communication, Collaboration, Silo-Mentality, Intra-Organizational Provincialism

Foreword

This thesis marks the end of my master's degree in international hospitality management at the University of Stavanger (UiS). It has been a long journey, and I am now really looking forward to start using everything I have learnt throughout both my bachelor and master's degree in real life situations. The topic of climate for innovation was chosen as it was of interest for TINE I&M to improve on this area, as they have recently gone through a major reorganization of their departments, meaning that there were big changes in the organizational climate.

There are many I would like to thank for helping me through the process of writing this master thesis. Firstly, thank you to my advisors: Håvard Hansen (UiS), Johanne Brendehaug (TINE I&M) and Mette Vabø (TINE FoU). Thank you to TINE SA for giving me the opportunity to investigate an issue within their organization, and to VRI Rogaland for funding the thesis. Thank you to my fellow master students for helping me through countless days and nights at the library. Thank you to Marita Joswig, Solveig Berge, and Ingrid Hellen for spell-checking and constructive-criticism. And lastly, thank you to friends and family for supporting me through this process, and for not getting angry when I used you as targets for my frustration.

Audhild Bergsagel

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1. Introduction

In todays' rapidly changing business environment, organizations who are able to reinvent themselves and/or their products tend to "outperform their competitors" (Tidd, Bessant, & Pavitt, 2005, p. preface), and organizational innovation is acknowledged as the key to success (Cohen & Levinthal, 1990; Martins & Terblanche, 2003; Shipton, Fay, West, Patterson, & Birdi, 2005). Innovative organizations create new and improved ways of delivering their products and services, and innovations play vital part of all stages of an organizations lifecycle, from the initial ideas that lead to the existence of an organization, to the ideas that help renew the organization in order to avoid decline or termination (Ahmed, 1998; Amabile, 1988; Janssen, Van de Vliert, & West, 2004; Lester, Parnell, & Carraher, 2003; Martins & Terblanche, 2003). While "creativity is the development of ideas", innovation is "the development and application of ideas in practice" (West, Hirst, Richter, & Shipton, 2004, p. 271), highlighting that innovation is an idea that has been carried out, and meets the expectations of the marked (Bessant & Tidd, 2011; Nofima, 2017; Shipton et al., 2005). The knowledge needed to create these ideas can come from many different sources, such as imitation, inspiration, and demand (Tidd et al., 2005). However, innovation is more than successfully acquiring knowledge from various sources; "it requires an organizational culture that constantly guides organizational members to strive for innovation and a climate that is conducive to creativity" (Ahmed, 1998, p. 30).

This study will explore culture and climate for innovation in a mature organization, TINE SA, and more specifically their department for innovation and research; TINE Innovasjon og Marked (TINE I&M). TINE is one of the leading actors in the Norwegian dairy industry, an industry which is highly dependent on innovation, due to most actors in the market offering

equal or similar products. Because the products on the marked are so similar, TINE needs to differentiate themselves from the competition by being innovative. TINE has a high focus on innovation, research, and development, stating that "our tradition is to renew ourselves" (TINE, 2018b). In 2018, TINE SA reorganized their departments, creating the new TINE I&M, consisting of Research and Development (FoU), Marketing, and Business Development. When the research process for this study first started, TINE FoU was still a separate unite, and the new TINE I&M had not been implemented. As the new organizational changes were getting closer, it was evident that the employees were worried about the impending changes, and how this would affect their innovative efforts, especially concerning structure, culture, and communication. During discussion with the advisor from TINE I&M, it was decided to focus on the analysis of the current innovative climate, with the aim of identifying areas of improvements within TINE I&M's climate for innovation. The following main research question was identified:

In which areas can TINE I&M improve their organizational climate for innovation

To achieve this, a qualitative study was conducted, where employees from TINE I&M were interviewed regarding innovation and factors for climates that supports innovation, including key success factors. Three supporting research questions were identified:

RQ1: How is innovation perceived in TINE I&M

RQ2 What are the key factors for innovation at TINE I&M

RQ3: Which determinants for organizational climate for innovation is present in TINE I&M

2. Innovation: a theoretical framework

There are many definitions of innovation, but the general idea is that innovation is the creation of something that provides new or increased value (Amabile, 1988; Buckler, 1997; Tidd et al., 2005). Although most commonly acknowledged as changes in products or services, innovation can also be changes in position, process, or paradigm (Amabile, 1988; Bessant & Tidd, 2011; Francis & Bessant, 2005; West et al., 2004). Tidd et al. (2005) defines innovation as "creating new possibilities through combining different knowledge sets" (p. 15). The knowledge needed to create these possibilities or changes may already exist in the organization, or it could be attained through research or co-creation (Tidd et al., 2005). TINE is highly dependent on innovation and has long had their own research and development department, called FoU, who focuses on creating possibilities and changes through in-house knowledge and research. Before the 2018 reorganization, innovative efforts were divided by department. While FoU mainly worked on product/service and process innovation, marketing and business development worked on the changes in position or paradigm. The new TINE I&M has instead divided into type of innovation: incremental and radical innovations. Although TINE I&M also includes many units such as packaging, and project management, this study will mainly look at their two innovation units: Existing Portfolio (EP) and Radical Innovation (RI), which includes people from both FoU and Marketing.

Innovation is often illustrated as a process, where ideas are generated, applied, and implemented into value creating innovations (Ahmed, 1998; Bessant & Tidd, 2011; Janssen et al., 2004; Kanter, 2000; Nofima, 2017). Buckler (1997) illustrates the innovation process as three distinct but overlapping phases: the fuzzy front end (idea generation), the gating process (product delivery process), and the operations phase (commercialization). While these three

phases are “basically three fundamentally different microcultures within an organization” (p. 43), they need to be combined in order to take full advantage of innovation and gain a competitive advantage (Buckler, 1997). From initial observations it became apparent that before the reorganization, marketing was involved in all three parts of the process, while FoU were mainly used in the second phase: the product delivery process. This is one of the aspects that will be investigated in this study.

Buckler (1997) states that mature organizations tend to become less innovative over time. However, becoming less innovative is not an option for TINE if they wish to keep or expand their marked share, as innovation is vital for the economic sustainability of organizations in the long term (Koberg, Detienne, & Heppard, 2003, p. 22). Innovations can be divided into two categories: incremental and radical. While incremental innovation is defined as “small improvements to existing products, services, or processes”, radical innovation entails “significantly different changes to products, services or processes (Bessant & Tidd, 2011, p. 40). Incremental innovations such as a new flavored yoghurt or reduction in the fat percentage of a milk product, is the foundation for TINE’s continued growth. These incremental innovations are the biggest part of TINE I&M’s research area and is the type of innovations most noticed or experienced by the customers, as it mostly deals with new or improved products (TINE, 2018b). Without these incremental innovations, TINE would gradually lose their market share and customer base, as they are under constant pressure from supermarket-chains to continuously provide new products in order to maintain their shelf-space. Looking at the organizational growth cycle presented by Normann (1977) (illustrated in Figure 1), these incremental innovations can be seen as supporting the growth and maturity stage.

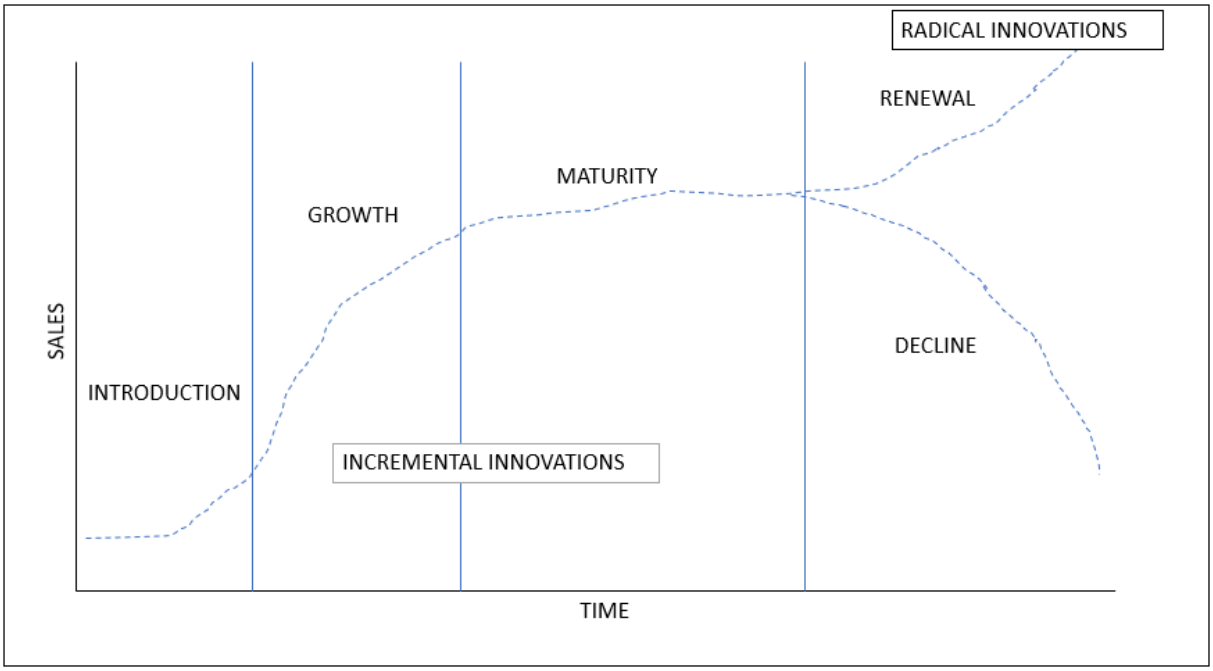

Figure 1: Organizational Growth Cycle (Adapted from (Normann, 1977))

Nevertheless, at one point of the organizations growth cycle, an organization needs renewal in order to avoid decline and/or determination (Buckler, 1997; Koberg et al., 2003; Normann, 1977). An innovation big enough to renew an organization is often defined as a radical innovation. Radical innovations are acknowledged as being more risk filled than incremental innovation, but offers a higher potential pay-off, and can have a big effect on the marketplace (Story, Daniels, Zolkiewski, & Dainty, 2014). For TINE, these radical innovations are defined as changes in position and paradigm. One such radical innovation is TINE's new service called TID (Time), which is currently being piloted in a selected area in Oslo. TID entails TINE not only providing food-products to the end-user, but also providing a service where a person is coming to the end-user's homes to do chores such as preparing food, doing the dishes, go shopping, or whatever else the end-user might require. This is a completely new area for TINE, and requires new processes, knowledge, etc., and is considered to be a radical innovation. Radical innovations such as TID are executed mainly by those working in the RI department, while incremental innovations are seen as innovations on Product/Service and

process, and is undertaken by those in EP. This is outlined in Figure 2.

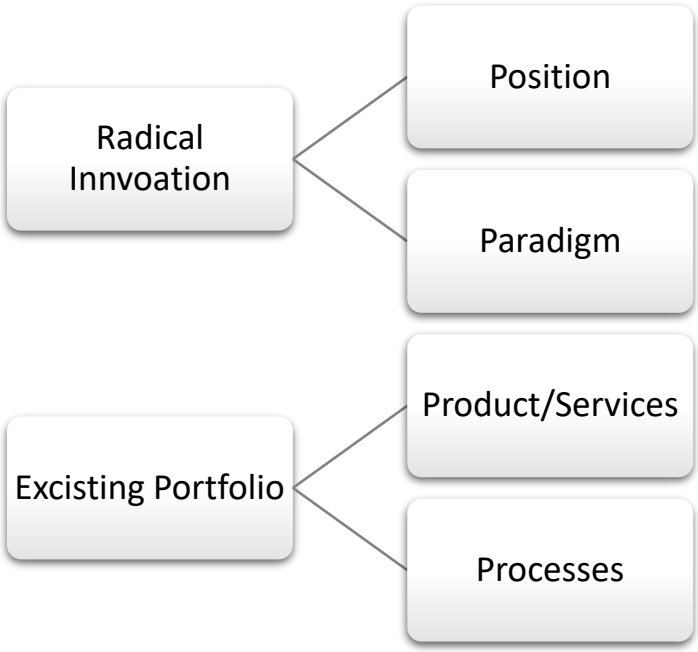

Figure 2: Divide of Innovation in TINE I&M

While TINE clearly separates innovation into two distinct categories, it can be argued that innovation is a "a hierarchy of organizational changes", where innovation is judged on how much the change affects the organizations "premises or decisions" (Tushman and Romanelli, 1985, cited by Koberg et al., 2003, p. 23). This implies that the changes often referred to as incremental innovation, such as modifications to existing products, can end up becoming radical innovations. This unclear differentiation between incremental and radical innovation may be why studies "rarely distinguish among types of innovation" (p. 22), and why it can be difficult for organizations to get more radical innovation (Koberg et al., 2003). This study will look at how radical and incremental innovations are perceived by employees at TINE I&M, and how these perceptions are harming or aiding their innovative efforts.

2.1. Factors for Innovation: Climate and Culture

Innovations can derive from many places, and "a wide range of internal and external factors are involved in explaining the emergence of creativity" (Mathisen, 2005, p. 9). While literature tends to focus on the individual factors for creativity, viewing creativity as an individualized phenomenon, the social environment also has a big impact on an individual's creative efforts (Amabile, Conti, Coon, Lazenby, & Herron, 1996; Martins & Terblanche,

2003; McLean, 2005). Buckler (1997) defines innovation as not only the activities that provides new value, but the environment and culture within the company which drives the value creation. This is supported by Shipton et al. (2005, p. 120), who states that "the actions and learning of others" within an organizations is guided by the organizations "systems, structures, strategy, routines and prescribed practices", i.e. climate and culture. While climate "represents the descriptions of the things that happen to employees in an organization" (Patterson et al., 2005, p. 380), culture is about *why* things happen, often related to the norms, beliefs, and values of the employees (Ahmed, 1998; Patterson et al., 2005). It is evident in the literature on the subject, that the two terms are often used interchangeable, and no real distinction is made (Ahmed, 1998; Lone, Bjørkli, Bjørklund, Ulleberg, & Hoff, 2011; Patterson et al., 2005). This makes it difficult to assess whether a factor mentioned in a study is affecting the climate or the culture, and it can be argued that climate and culture represent "different but overlapping interpretations of the same phenomenon" (Ashkanasy, Wilderom, & Peterson, 2000, p. 7). To illustrate how organizational culture affects innovation, Martins and Terblanche (2003) developed a model (shown in figure 3) presenting five determinants of organizational culture that influence creativity and innovation: Strategy, Structure, Support Mechanisms, Behavior that Encourages Innovation, and Communication. Due to the interchangeability of climate and culture and the holistic nature of the model, it can be seen as showing the climate's effect on creativity and innovation, not just the culture's. For example, structure and resources are clear examples of climate, not culture. This study mainly examines the organizational climate, as the aim is to describe the processes and practices that encourages innovation, not the underlying norms and values. In other words, the study will explore *what* is happening, not *why*. However, as culture can be seen as "a reflection of climate" (Ahmed, 1998, p. 32), certain elements of culture may also play a part in the analysis.

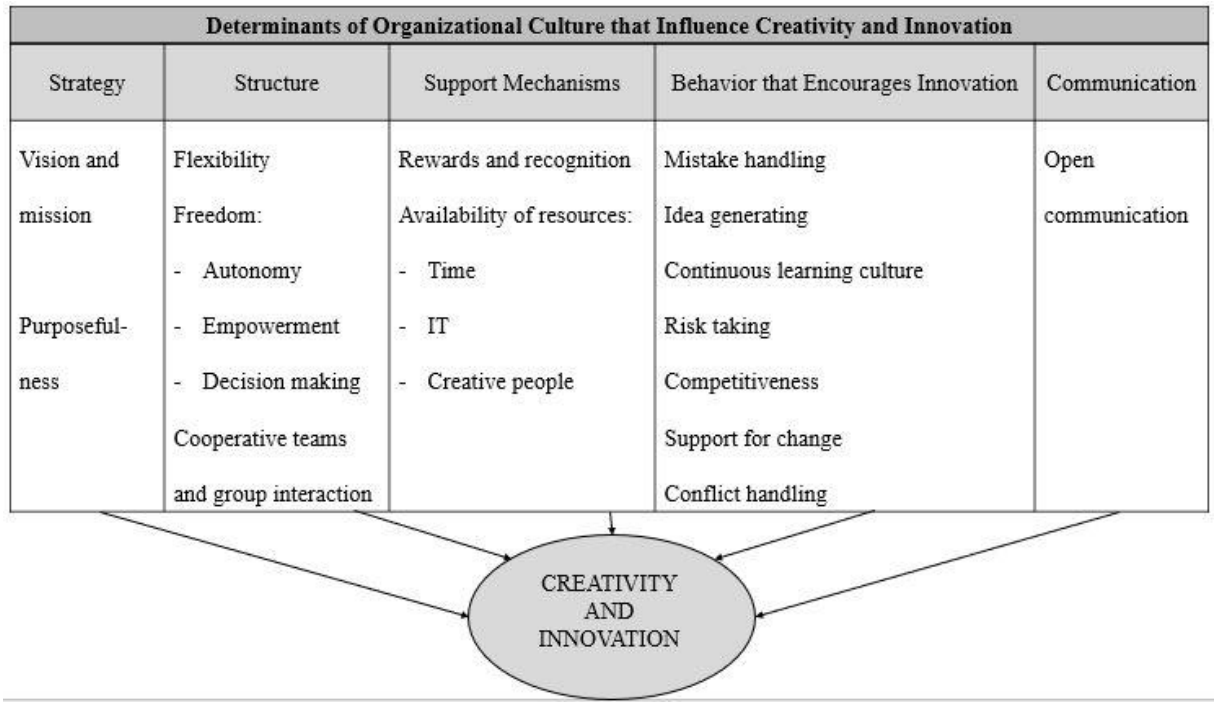

Figure 3: Determinants of Organizational Culture That Influenced Creativity and Innovation, adapted from Martins and Terblanche (2003)

3. Method: Design and Procedures

To investigate the current innovation climate at TINE I&M and identify potential areas of improvement, an exploratory cross-sectional case study approach was conducted. The study is evaluating creativity and innovation on an organizational level, while using individuals' perceptions of the organization as measures. The results of the study are based on semi-structured interviews, and observations at TINE FoU and I&M.

On par with Yin (2004) the research process was designed as being linear but iterative, with a continuously sampling of secondary data throughout the entire process as themes and issues emerged. The research process consisted of five main steps, as outlined in Figure 4. The following section will explain the five steps of the research process.

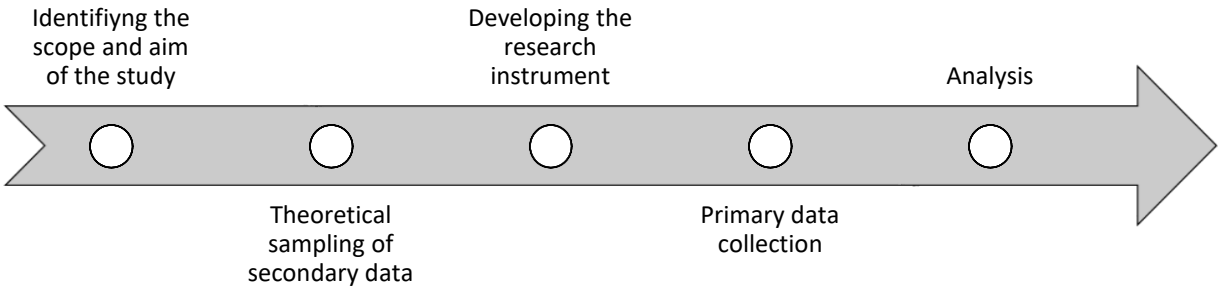

Figure 4: The Research Process, adapted from Yin (2004):

3.1. Identifying the scope and aim of the study

As outlined in the introduction, the scope of the study was recognized as analyzing the current innovative climate of TINE I&M, with the aim of identifying areas of improvements. The following section will outline the identification of the population and selection of the sample.

Sample

As the study will explore innovation and climate within TINE I&M, the research population was employees at TINE I&M. To cover a broad range of the organizations population, a purposeful sample technique was applied (as outlined in Cooper & Schindler, 2001; M. N. Marshall, 1996). To ensure this, the initial sample was suggested by the advisor from TINE I&M, who had selected participants based on their role in the company. The sample included participants within a wide range of roles, experience, and education, aiming for a "maximum variation sample" (M. N. Marshall, 1996, p. 523). The sample included participants from both of TINE I&M's main locations: Måltidets Hus in Stavanger, and Lakkegata in Oslo. A sample of twelve employees were asked to participate in the interviews, with six going through with the interviews. Initially, two more employees had agreed to participate, but had to pull out at

the last minute due to personal reasons. The purpose of this study was not to make generalizable theory or statement, but to identify potential areas of improvement specific for TINE I&M. The wide range of participants meant that the study had the chance to uncover the issues present in most parts of the department and see if there were any correlations or un-correlations between them. Thus, the most important part was to have a maximum variation sample, not a sample high in numbers.

3.2. Theoretical Sampling of Secondary Data

For the theoretical sampling of the secondary data, the main source of information was journals found on Google Scholar. Textbooks were mainly used for guidance on the methodology of research and was to a large degree avoided as sources of the theoretical sampling of the secondary data, so as to avoid the textbook effect (Rotfeld, 2000). The secondary data laid the foundation for the interview guide used in the primary data collection, and as reference points for the analysis of the primary data (Cooper & Schindler, 2001). As mentioned, the process was iterative, and the sampling of secondary data was done continuously throughout the research process.

3.3. Developing the Research Instrument

Although there are validated scales that evaluate climate and culture for innovation, such as KEYS (Amabile et al., 1996) & TCI (Anderson & West, 1998), they are mainly designed to be applied to quantitative studies (Ashkanasy, Broadfoot, & Falkus, 2000; Mathisen & Einarsen, 2004). In accordance with the wishes of TINE I&M, a qualitative study was to be conducted, so as to better capture the depth of the issues. Individual interviews were selected as the data collection method, as the aim was to explore “the views, experiences, beliefs,

and/or motivations of individuals" (Gill, Stewart, Treasure, & Chadwick, 2008, p. 292). Individual interviews were preferred over focus groups, as the participants may not have been comfortable sharing their worries and dissatisfaction with their co-workers (Boyce & Neale, 2006; Christoffersen, Johannessen, Tufte, & Utne, 2015; Kaplowitz, 2000; Milena, Dainora, & Alin, 2008). This was especially significant as the participants came from different levels within the organization, some directly above or beneath one another, which would most likely have restricted honest answers, especially from the lower level employees. Face-to-face interview was the preferred method of conducting the individual interviews, as visual encounters allow for analysis of non-verbal language and social cues, and creates a more natural context where people feel free to express themselves (Irvine, Drew, & Sainsbury, 2013; Novick, 2008; Opdenakker, 2006). Despite this, phone interviews were also deemed as an adequate method when face-to-face interviews were not possible due to the location of the participants, and was the method used for two of the interviews (Novick, 2008; Opdenakker, 2006; Sturges & Hanrahan, 2004). The interviews were semi-structured, as it is more free than structured interviews or surveys (Christoffersen et al., 2015; Neuman, 2014). The use of semi-structured interviews gave the participant a chance to speak more freely than in structured interviews or surveys, which could lead to uncovering aspects of the innovation climate that was not initial queried by the researcher (Kothari, 2004)

Interview Guide

To answer the main research question, an interview guide was developed to investigate the three minor research questions: how is innovation perceived in TINE I&M (RQ1), what are the key factors for innovation at TINE I&M (RQ2), and which determinants for organizational climate for innovation is present in TINE I&M (RQ3). There were no direct questions in relation to the main research question. On par with the model by Martins and

Terblanche (2003), the interview guide included questions covering strategy, structure, support mechanisms, behavior that encourages innovation, and communication. The model by Martins and Terblanche was chosen as the framework for RQ3, as it gives a broad overview of the organizational climate and its effect on innovation. It is based on existing literature on the subject and has been cited over 1600 times according to google scholar (19.04.2018). General questions about innovation were also included, so as to get an overview of how the participants viewed innovation, particularly what the key factors for innovation were, and the difference between radical and incremental innovation.

The interview guide was made in Norwegian, as this was the first language of the participants and the researcher, and was the preferred language for conducting of the interviews. The aim was that this would avoid language barriers or confusion, and that the participants could express themselves freely in a language they felt comfortable using. The interview guide was not shared with the participants before the interview, but a brief overview of the study was given ahead of time. This was a decision made in collaboration with the advisor from TINE to avoid participants constructing their answers before the interviews, and to get more on-the-spot and honest answers. The interview guide can be found in Appendix A.

The interview guide provided a short introduction, where the topic and other important information was introduced to the interviewees. The interview guide included three initial administrative questions, before a mix of structured and unstructured target questions. The initial administrative questions explored the participants' role in company, experience, and education. These questions were included to ensure that the participants represent a wide range of the sample population and were not used in the succeeding analysis. Had these facts

been included in the results, it would have been too easy to identify the participants. These questions were not recorded, and the answers were written down on a separate piece of paper, and cannot be traced back to the individual participant, as per the instructions from NSD (Data Protection Official, see Appendix B).

Although the interview guide had a clear structure, it was simply a guideline to make sure that all main topics were covered during each interview, which would make it possible to compare answers and opinions. There was no pilot-testing of the questions included in the interview guide due to the limited availability of sample participants, but the interview guide and questions were reevaluated after each interview. By listening and reviewing the recordings after each interview, the researcher was made aware of changes that would improve future interviews.

3.4. Primary Data Collection: Qualitative Interviews

Initial Contact and Communication

The sample population was first informed of the study by the advisor from TINE I&M, who sent an email to prospective participants, presenting the researcher and the study, and encouraging them to partake in the study. The prospective participants were then contacted by the researcher either by email or in person at the offices in Stavanger, where an overview of the interview subject was given, and date and time for the interviews were agreed upon. The interviews were expected to last 30 minutes, but the interviewees were asked to set aside 60 minutes. This was done to account for technical issues, and to ensure that participants were not cut off by other engagements etc.

Collection

The interviews were conducted between the 16th and 27th of April 2018, either in person at the participants offices in Stavanger, or over telephone. The interviewees were free to choose the location for the interviews, meaning that every participant was answering the interview in a setting both convenient and comfortable for them. The interviews were recorded and then transcribed by the researcher of this study. The recordings were later deleted. The participants were assigned numbers from 1 – 6, and referenced in this paper as P1, P2, and so on. The numbers were given at random and does not reflect the order of which the interviews were conducted. There was not made a *scrambling key*, as this would have made the study subject to notification at the NSD (See Appendix B).

During the interviews, participants were probed to elaborate on their answers, and were free to bring up topics they wanted to talk about. The questions were asked in a more informal manner than outlined in the interview guide, and new questions were added based on the answers from the participants. The participants came from many different fields of expertise, and thus had different focuses and viewpoints that meant that no interview had the same structure, order, or questions. However, the main points of the interview guide were covered in every interview. The interviewees were also asked for their consent for recording the interview, and for the results of the interview to be used in this paper. After the last question, the interviewees were asked if they had anything else to add, before being thanked for their participation.

Anonymity

It was evident that some of the participants were worried that their answers would reflect badly on TINE, and they wanted to be sure that their answers could not be traced back to them. The participants were all ensured that the answers were anonymous, and that the study and study was confidential for five years from the date of submission. It was also made clear that the intent of the study was to help TINE I&M, not to put the organization in a bad light by picking at their flaws. The participants were also informed that they were free to not answer any questions they felt uncomfortable with, and that it was also possible to answer questions *off the record*, i.e. turning off the recorder for certain questions. No participants choose to do so, and all questions were answered by all participants.

3.5. Analysis of the Data

The qualitative data was analyzed and processed in three different steps, as per the outline found in Neuman (2014, p. 488) (see Figure 5). During the primary data collection, the researcher took notes while conducting the interviews, highlighting emerging themes and thoughts, both in relation to relevant literature and regarding the answers from the previous interviews. Notes were also taken during the interviews on any non-verbal communication of significance, as this would not become apparent when listening to the recordings. Shortly after the interviews, these notes were revised and extended upon, and made into field notes. Secondly, sound recordings of the interviews where transcribed, resulting in approximately 60 pages of transcribed interviews. During this process, notes were also dotted down. In the final analysis and coding of the data, the notes from both the data collection and the transcribing process were used, in addition to the transcribed interviews and secondary literature.

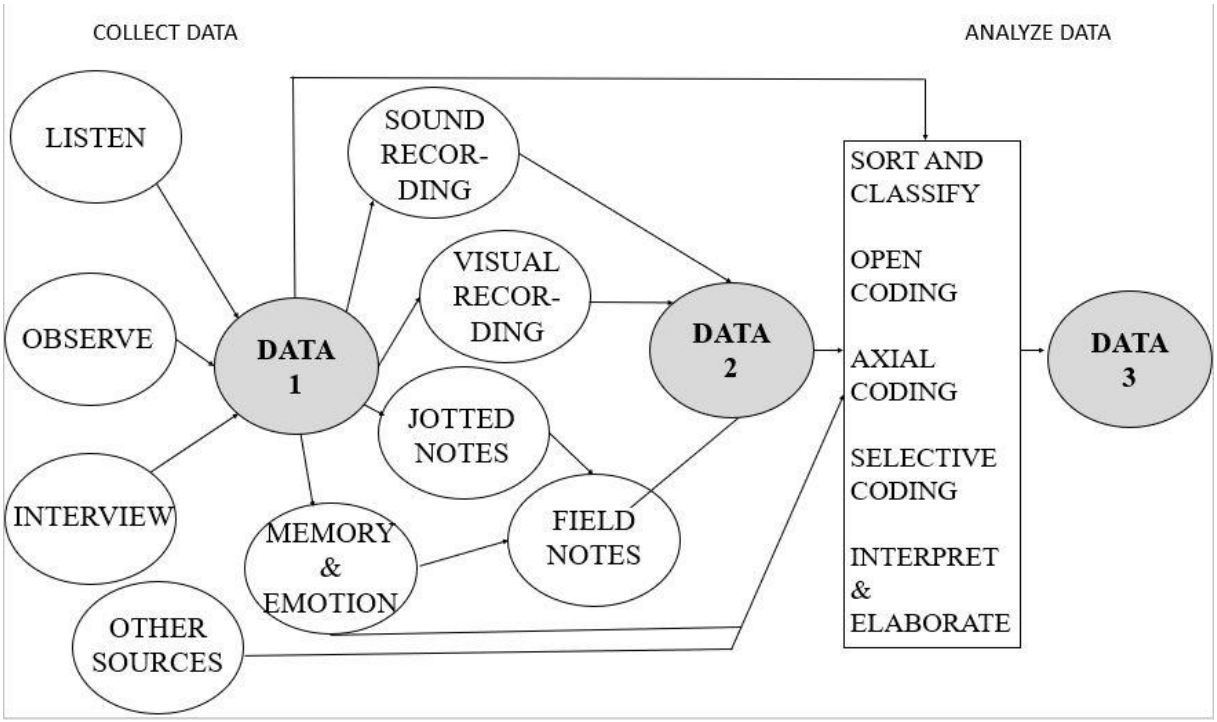

Figure 5: Analysis of Qualitative Data, adapted from Neuman (2014)

Each transcribed interview was first analyzed individually, with main points highlighted. Meaning condensation was then used as a tool to make the text more manageable, and to gain an overview of the main concepts and thoughts of each participant (as per Kvale, 2008). The main points from each interview were then analyzed collectively, looking at the common themes and issues that emerged. The data was continuously read, sorted, and weighted up, so as to identify important concepts in need of deeper analysis (Burnard, 1991; Jenner, Flick, von Kardoff, & Steinke, 2004).

The data was first coded with key words, before being categorized as per the content analysis approach (Elo & Kyngäs, 2008; Hsieh & Shannon, 2005; Krippendorff, 1980). The data was coded using both key words and color coding. Codes were derived from vivo codes and by social science construct, meaning that codes were both “obtained directly from the data” and

"created or imposed by the researchers" (Benaquisto & Given, 2008, p. 4). Codes and categories where developed continuously while reading and re-reading the interviews. The initial categories and codes were later assembled into broader categories, before being examined in depth as separate categories as per axial coding (Benaquisto & Given, 2008).

The results of the last part of the analysis, interpret and elaborate, can be found in the Findings and Discussion section of this study.

4. Findings and Discussion

The following section will present and discuss the findings of the study. The findings from RQ1, RQ2, and RQ3 will be presented separately, before being discussed in the answer to the main research question.

4.1. RQ1: How is innovation perceived in TINE I&M

Innovation is generally perceived by the sample as something that creates value, either for the company or for the customer. A summary of the participants perceptions on innovation and radical innovation can be found in Appendix D and Appendix E. Most participants agree that an idea must be implemented in order to become an innovation, and should consequently create value. It was also noted that the innovation does not need to be ground-breaking or new, but had to be an improvement of some sort:

> "It is about improving that which was before. An effectivization, improvement, an experienced increase in value. If we can do something better, faster, more resource efficient, more accurately, then it is an innovation" P6

While incremental innovation is mostly seen as the core functions and foundation for the organization, radical innovation is seen as providing new growth to the organization, and requires more risk taking. It is clear that TINE I&M is mainly looking outside the organization to find radical innovations, and that radical innovation is something new that expands away from the core operations of TINE I&M. It is stated that radical innovation is to enter new business markets, for example when TINE entered Salma, an example that was brought up through many of the interviews on a range of questions. This will be discussed further when answering the main research question, where it will be argued that radical innovations can also come from the organizations core operations, and that innovations can be classified incremental or radical based on a where they are on the innovation scale.

4.2. RQ2: What are the key factors for innovation at TINE I&M

There were three main questions related to key factors for innovation in the interview guide, two on innovation in general, and one specific for radical innovation. Figure 6 illustrates the key factors for innovation outlined by the participants. The participants were asked directly what they thought the key factors were, but the factors also came from an analysis of the answers to the other questions, such as reasons for success or failure in innovation. A table outlining the mentioned factors based on each participant can be found in Appendix C. Although all of the factors mentioned by participants are important for innovation, only certain factors were identified as needing improvement, mainly "knowledge and

understanding of colleagues", "passion projects", and "internal cooperation and communication". These identified factors were brought forwards into the discussion of the main research question, as parts of the areas of improvement.

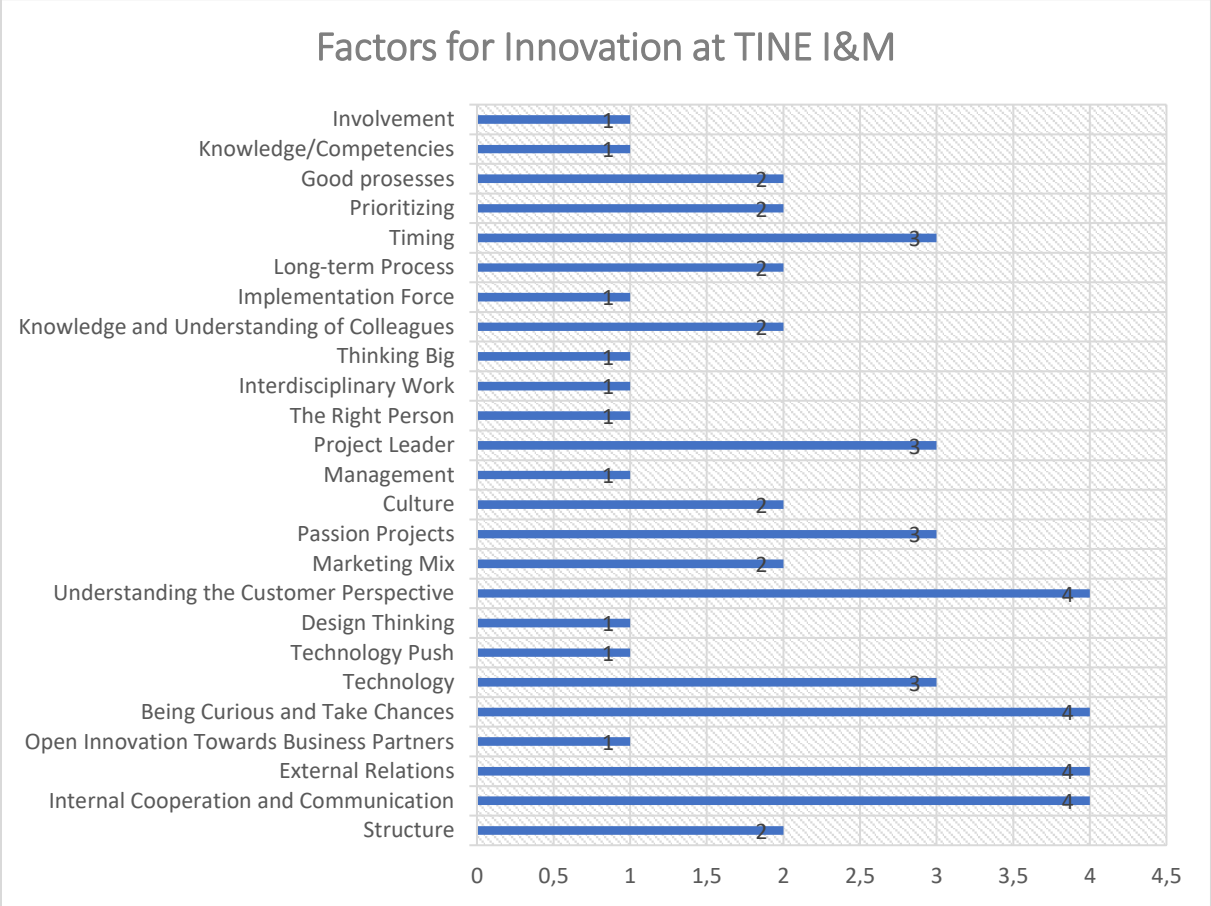

Figure 6: key factors for innovation within TINE I&M, as outlined by the participants

4.3. RQ3: Which Determinants of Organizational Culture that Influence Creativity and Innovation are present in TINE I&M

In order to analyze the organizational climate for innovation and answer the main research question, the study aimed at identifying the determinants of organizational climate for innovation at TINE I&M. The current climate for innovation at TINE I&M is complex, with many factors, and especially in relation to the reorganization that has recently occurred. It was

clear that although TINE I&M fulfilled many of the criteria from Martins and Terblanche (2003) there were still many areas of improvement. The main findings related to the determinants for creativity and innovation is outlined in Table 1 below. It is clear that although TINE I&M has aimed for a good organizational climate for innovation, there is still a long way to go. Many of the participants stated that they believed that the new changes, once completely implemented, would benefit the climate greatly and allow them to be more innovative. Nevertheless, there were clear limitations, especially in communication, interaction, cooperation, and time management in the current climate. The factors in which TINE could improve will be discussed later in this paper, as a part for the answer to the main research question. The already successful factors for climate for innovation will not be elaborated on any further.

Determinants of Organizational Culture and Climate that Influence Creativity and Innovation in TINE I&M				
Strategy	**Structure**	**Support Mechanisms**	**Behavior that Encourages Innovation**	**Communication**
Explicit vision for TINE SA Only one person knew about TINE I&M's vision	Relatively flat, but more hierarchy than the old FoU People often constricted to projects Large degree of autonomy, but the decision-making is at a high level Allowed to have Passion Projects (but not allocated time) Project Groups; - 4-5 people - decided by PSI* - Communication mainly by Mail - No interaction between groups *Portoføljestyring Innovasjon (Portfolio Management)	Little reward and recognition Focus on team work, not individuals Little time to be innovative, very restricted to project work Sufficient resources such as IT and people, but not necessarily utilizing them to the full extent (Especially due to time constraints) Many resourceful people, but many are "old school" and set in their ways.	Mistakes are allowed, but should not aim at failing, but when it happens it is important to learn from your mistakes Acceptance for risk taking Learning Culture: not much communication and sharing of ideas and knowledge No formalized idea-sharing platform, mainly in pre-established projects	Mostly only with people from your own department - cross "department" communication only through projects and on the right "level" In projects, communication is mainly on email and/or skype No interaction between groups

Table 1: Determinants of Organizational Culture and Climate that influence Creativity and Innovation in TINE I&M

4.4. In which areas can TINE I&M improve their organizational climate for innovation

From the interviews, many areas of improvement where highlighted both in vivo and by social science constructs. These areas were identified through the respondents' answers to RQ1-3, and then merged into six main concepts. These main concepts will now be presented and discussed.

Allocation of time

As outlined by Judge et al. (1997, cited by Martins & Terblanche, 2003, p. 69) successful innovation is "chaos within guidelines". Thus, management should strive to set clear goals and objectives, but still allow the employees a certain degree of freedom, allowing them to be inventive and creative (Amabile, 1988; Martins & Terblanche, 2003). This is important, as having too close a rain om employees can kill "a lot of projects at an early stage" (Amabile & Gryskiewics, 1987, cited by Amabile, 1988, p. 125). The innovation process may take a long time, and certain ideas might not become interesting or viable until late in the process. Thus, if a company is too restricted, and shuts down initial ideas that they do not like, they might lose out on many good solutions. Thus, freedom and autonomy are important factors for innovation. Within TINE I&M, people are encouraged to work on passion projects, and are given a large degree of autonomy, but employees state that they are very constricted by time, which affects their innovative efforts.

Resources such as information and technology are important for innovation, but the perhaps most important resource is time (Martins & Terblanche, 2003). Without enough time to be innovative, it does not matter how much resources, knowledge, or inspiration a person has, as

there is no time to act upon it. The lower-level participants from TINE I&M clearly stated that they felt very restricted to project work, and that this limited their time to work on passion projects and stay on top of current research in their respective fields. The general guidelines for time allocation at TINE I&M was identified as the 70/30 rule; 70 % occupied in projects, and 30 % on other things. This is more than the suggested guideline by Martins and Terblanche (2003), who argue that employees should be given 15 percent allocated time to work on projects and be innovative. However, it was made apparent that those 30 % were often used on travels, meetings, etc., resulting in no real allocated time for being innovative. This has led to the sample feeling that they had no time to work on passion projects, or to read up on recent literature, studies, market reports, etc. which could have benefitted them in their creative processes and projects.

> "I am very locked to project work. There might be some time in-between to think, but I do not go down to the lab and do things. I'm sure I could if I really wanted to, but unless it is in connection to a project, it requires a lot more to get things going, as we are really pressed on time in regards to delivering on projects" P1

This implies that TINE I&M should focus on enforcing the use of the allocated time for innovative efforts. Nonetheless, this is evidently a difficult thing to do as most participants state that their schedules are booked solid, and that time is a scarce resource. Thus, any time allocated to working on passion projects or other innovative efforts are the first to go when more pressing matters occurs. Another factor to take into account is that innovation cannot be forced or anticipated. If an employee is given an allocated time slot of 1 hour to *be creative* on Monday between 13 and 14, that employee might not be in a creative mode at that certain

time. Nevertheless, this time slot should still be used on passion projects or reading recent literature or research that could enhance innovative efforts. More workshops or idea-sharing sessions is also a way to ensure that employees are using their allocated time on creativity and innovation.

Vision

TINE's core vision is "Together we create real food-experiences people want", with goals such as "give our customers and consumers value for their money" (TINE, 2018a). This vision seems to "support creativity and innovation", which is highlighted as one of the important factors for successful organizational innovation (Martins & Terblanche, 2003, p. 69). TINE's vision was clear to everyone, and was mainly explained as being about cooperation, and meeting the needs of the users by giving them good products and experiences. While there was only one participant who got the vision 100 % correct, everyone knew the core of the vision. It was highlighted that food experiences are different for everyone, and that TINE's vision is to create food experiences to everyone. Food experiences are not just products, but a meal, a setting, i.e. the experiences related to food. It was stated that the reorganization of the departments has put TINE in a good position to reach the vision, by being closer together and avoid silo mentality, and that there is a much higher focus on experiences broader than just the products. Despite this, three limitations in regards to the vision were brought forward. Firstly, it was unclear what *real food experiences* are, making the vision somewhat open to misinterpretation. Secondly, only one participant stated that TINE I&M had their own vision;

> "We create TINE's future" P4

This could mean that the vision has been severely under communicated, or that there is in fact no separate vision for TINE I&M, and that the participant was misinformed. Lastly, while everyone knew TINE's vision, there seemed to be a lack of understanding of "why or how it will be achieved" (Bodell, 2014). When asked to elaborate on how they were going to reach the vision, everyone gave brief answers, and no two participants answered similarly.

> "well, we have a strategy that has just been launched, and it is like four points, but I think… it's just a word or two. It doesn't really say that much about what it entails, and how to do it. But it is for example *Sustainability*. So, it is through sustainability that we are going to reach the vision. The whole vision is like … nice and proper, but it doesn't tell us much, and it doesn't really create a burning passion" P2

TINE I&M should focus on creating and communicating a separate vision for TINE I&M, which should provide the employees with a shared sense of purpose, aiming to bringing the units closer together (Tidd et al., 2005). The current vision expressed by P4, *we create TINE's future*, is deemed a good vision, but could benefit from further highlighting the togetherness of the new department, for example by changing the vision to: *together we create TINE's future*. Once the vision is set, it is important that TINE I&M conveys the vision to all its employees, and explain how they are going to reach the vision.

Radical Innovations from the Core

There is a consensus that while RI operates beyond the core of the organization, looking for opportunities to expand into new territories, innovations from EP is always connected to the core.

> "Radical is about challenging the core and doing that which the core cannot do. It is important that there is cooperation between EP and RI, because we (EP) still need to expand and challenge ourselves, but we will always be connected to the core in a way, while they (RI) challenge that which is beyond the core" P4

This seems to imply that radical innovations can only be outside of the core. However, it can be argued that radical innovations can also happen within the core. In the same way that radical innovation can be defined as significant changes, Herbig (1994, cited by Koberg et al., 2003, p. 23) defines incremental innovation as "low in breadth of impact". This scale of innovation is supported by Tushman and Romanelli (1985, cited by Koberg et al., 2003, p. 23), who states that innovation can be seen as "a hierarchy of organizational changes", where innovation is judged on how much the change affects the organizations "premises or decisions". This implies that incremental and radical innovation are just two *extreme points* on the innovation scale. This is illustrated in Figure 7. Thus, even a new flavored yoghurt can be radical if it provides enough value. For example, making a vegan yoghurt could

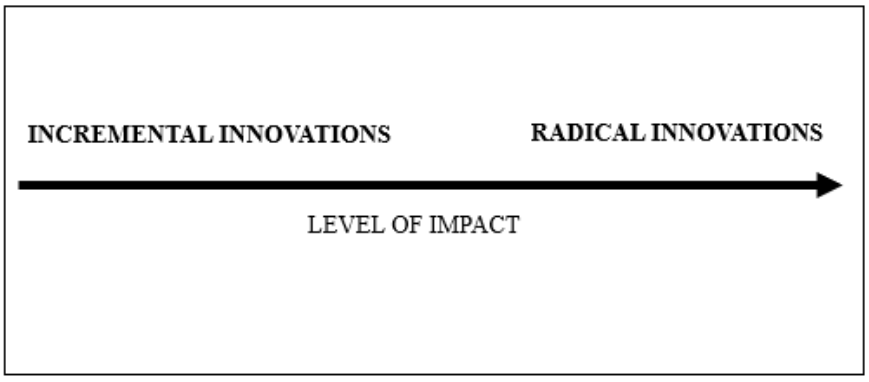

Figure 7: Innovation Scale

open up a whole new market for TINE, and could make a big impact on their sales and economy. However, by the definition from TINE I&M, it is not considered radical, as it is still within TINE's core operation. It appears that for TINE and TINE I&M it is not enough for radical innovations to provide high value, it must be outside the core; i.e. brand-new business opportunities that does not correlate to anything they have done before.

> "I work in Radical Innovation, which means that I work on innovations outside TINE's core activities, and I identify new areas for growth and work on concrete growth initiatives" P5

Despite the general view that radical innovation is something new that expands away from the core operations of TINE I&M, one participant gave a good explanation of how radical innovations can also be defined as an improvement of something within the core, in the same way as incremental innovation:

> "it is about needs; to uncover needs and finding new solutions to needs. In a way it is about effectivization. Creating the car was in one way a radical innovation, but at the same time it was an improvement of something. It solves a problem in a different way; from horse to car. It is radical, not incremental, but it does solve the same problem. So, it does not necessarily have to be an improvement of something that was before, but a better way of solving a problem for the user" - P6

As mentioned, TINE I&M has made a clear divide between radical and incremental innovation, even going as far as putting them into separate units of the department, with very different focuses. When being asked about open idea-sharing, one participant stated that it was of little use, as it would *only* result in "mostly ideas about new flavors and such" (P3), highlighting that incremental innovations are seen as inferior to radical innovations. This mentality could harm the innovative efforts of those working with incremental innovation, as the importance of their work is being undermined.

This study suggests that TINE need to work on radical innovations also in the EP department, as they also have the ability to come up with radical innovations within their fields, as opposed to the "business people" in RI. The knowledge, expertise, and skills needed to have radical innovations within the core operations already exists for TINE, thus limiting the need for the external resources associated with radical innovations outside of the core. This also makes the process quicker and smoother. For example, the workers at the lab can come up with radical ideas for changes in production that would save the company a lot of money. This study argues that such a situation would be counted as radical, despite being within the core, as long as it provides the company a great value.

Involving More Units Early in the Process

It is clear from both the interviews and observations/conversations with employees at the old FoU in Stavanger, that the researchers and P&T developers are brought into projects late in the process. All participants claim that the innovation process usually starts with the marketing department having an idea they want to execute. Then, depending on how far the idea has gotten, other departments are brought in on either the conceptualization or

concretization/development phase. This can be related to Buckler's (1997) innovation process outlined earlier. The important fuzzy front end or idea generation phase is done mainly by the marketing department, while other departments such as Product and Technology Development (P&T Developers) are only brought into the last two phases; product delivery process and operations phase. Thus, TINE is missing out on much of the competencies and experience of a large portion of their employees, which is a big limitation for their innovative capabilities. As outlined by Buckler (1997) once the initial idea generation is complete, the second phase (product delivery) is much more rigid and disciplined. The goal has been set, and it is now important to think about cost, time, schedules, etc. In this phase, there is little space for being creative, and new ideas are often shut down, as they will involve more time before completion (Buckler, 1997). When the P&T developers, nutritionists, etc. are brought onto the projects this late in the process, other departments such as marketing, has already spent a lot of time on the project, and wants the project implemented as soon as possible, "preferably yesterday" (P2). This is seen as stressing the situation, and P&T Developers are often given short and strict deadlines for projects. These deadlines and not being connected to the project early enough means that there is not much space for being creative and take risks. This severely limits the possibility to increase the complexity of the innovation, and potentially create radical innovations. Some participants claimed that the current ambition for TINE I&M is that more ideas should come from those working with development, as they can provide TINE with other types of ideas than what marked has, due to their different perspectives on technology and opportunities. This is especially apparent in regards to technology, where the marketing department does not have the technological competencies or experience to see new technological opportunities. While pull-motivated market-based innovations rely on market analysis to uncover demands, needs, inspiration, and imitation, knowledge based innovations are push-motivated, and rely on the knowledge and

competencies of the organization and its individuals (Tidd et al., 2005). This knowledge driven innovation is a very important source of innovation, as it can help organizations stay ahead of the marked. All competitors within any marked are continuously analyzing their marked and customers and is thus likely to identify needs and demand at approximately the same time as other actors within the marked. Knowledge driven innovation on the other hand, relies on the knowledge of individuals within the organization. This might give organizations and edge over their competitors, as they come up with new solutions that allows them to stay ahead of the market. Thus, TINE I&M should focus on including the various units at an earlier point in the project process, as this could increase the complexity of the innovations, which could lead to more radical innovations that bring higher value back into the company.

Communication and Collaboration

Communication is a vital part of the innovation process and is one of the key success factors in change and innovation (Amabile, 1988; Kanter, 2000; Linke & Zerfass, 2011). Not only is it necessary to communicate ideas to other parts of the organization in order to fulfill and implement the ideas, it can also help the creative thinking process (Amabile, 1988; Linke & Zerfass, 2011; Shipton et al., 2005). A study by Amabile and Gryskiewics (1987, cited by Amabile, 1988), showed that communicating ideas to others can actually make the initial idea-maker rethink or improve their ideas, as talking about the idea forces them to think about it. TINE has previously used the Doblin-model for innovation (Nofima, 2017), which presents 10 dimensions of innovation; profit model, network, structure, process, product performance, product system, service, channel, brand, and customer engagement. By combining these dimensions, an organization can create value and produce products, services, and processes that are hard to copy (Nofima, 2017). The more dimensions combined, the higher the value creation (Nofima, 2017). This combination of dimensions requires communication and

collaboration, which can be difficult, especially in large organizations where the different departments are segregated, and often in different locations. This is evident in TINE I&M, where there are communication issues between units, and between locations. It is shown clearly that informal communication is done mostly to those close by, and formal communication is done with relevant people in projects. This means that there is little informal communication between the various locations and departments, which is restricting the sense of community, and perhaps the value and outcome of any collaborations. It was evident that those located at Måltidets Hus in Stavanger is in minority and are often overlooked by those at the much larger Lakkegata. This was evident in the interviews with participants stationed at Lakkegata, who said that they did not often communicate with those from Måltidets Hus, and when they did, it was mostly by skype or email:

> "It (cooperation) is very good. We are sitting in open landscape offices, so the informal part is very well cared for, and in the formal part in processes are also good"
>
> (what about those in different locations?)
>
> "those who work in innovation, they are all in the same location"
>
> (but what about those at MH in Stavanger?)
>
> "they aren't that many though. There are some, and they … we are very good, we've always been on video, and now it's tools like Skype that is used all the time. So, I think it is working fine. And we travel between locations. So, in todays technological world, it is a minor problem in my opinion"

Others highlighted the difference between formal and informal communication:

> "The possibilities (to communicate) is there, but most of the time you end up talking to the people sitting around you. We are sitting in open landscape offices and see each other all the time, so that's not really a challenge"
>
> (Do you talk to those at MH?)
>
> "Very little. But research is also a part of our department, and we do have more regular meetings with researchers now, who are also located at MH. So we meet more regularly than before, but it depends on the person, and which projects they are working on"

While some found the communication to be sufficient, some (especially those at Måltidets Hus), note that most of the formal communication is done over Skype or Email, which they find very constrictive and limiting. TINE I&M use the program Skype for Business, where they mainly use the conference call function, i.e. not the video function. Thus, Skype communication is in this case not considered face-to-face interaction. This issue needs to be addressed by the management team, who should look into more efficient ways of communication. One participant said that the use of intra-organizational chat-applications would be useful.

> "I think it (communication) relies too much on email. I think emails are very cumbersome, and very little inspiring. And when you are working with innovation, it is very important to have a good flow on communication, as things go very fast. So I hope we can start using more technological things such as chat rooms, so that we can continuously chat all day and send each other links and so on" - P2

It was also clear that there was no communication between project groups, and that communication across units was mostly done at *the right level*. This means that while project leaders communicate with the various department leaders, there is no real communication between the various departments. This may limit the creative efforts, as cross-functional work teams should allow for "diversity and individual talents that complement one another" (Martins & Terblanche, 2003, p. 71). It also highlights the silos present in TINE I&M, and inhabits people from various parts of the organization from interacting and sharing their knowledge (Amabile et al., 1996; Buckler, 1997). People in cross-functional teams have different experience and expertise, and the interaction between them can lead to new and richer ideas that might not have been developed in a homogeneous team, thus creating synergy (Amabile et al., 1996; Martins & Terblanche, 2003). However, Buckler (1997) implies that people from different units or departments do not tend to mingle spontaneously, highlight the need for management to form and/or encourage cross-functional communication and collaboration. While creating a competitive culture is outlined by Martins and Terblanche (2003) as one of the key factors for the creation and assimilation of knowledge, this is not as relevant for the case of TINE I&M, as they are considered an R&D department, where they should be working as a team, not as competitors. What is more important, is to have a learning culture where the organization establish a capacity to "create, transfer, and implement knowledge" (Shipton et al., 2005, p. 119). This can be achieved by focusing on communication between personnel, "keeping knowledge and skills up to date and learning creative thinking skills" (Martins & Terblanche, 2003, p. 72). However, the most concerning part of the communication within TINE I&M, was the clear divide between the departments, showing both silo-mentality and intra-organizational provincialism.

Silo Mentality and Intra-Organizational Provincialism

It has long been established in sociology that groups "nourishes its own pride and vanity, boasts itself superior, exalts its own divinities, and looks with contempt on outsiders" (Summer, 1906, cited by Rosenblatt, 1964, p. 131). In the contest of organizational behavior, this is evident in concepts such as Silo-Mentality and Intra-Organizational Provincialism. Silo-Mentality as a concept in organizational behavior can be explained as "how parts of organizations function in a manner disconnected from the others" (Cilliers & Greyvenstein, 2012, p. 2), while Intra-Organizational Provincialism (IOP) is a sociological concept stating that "individuals have a tendency to undervalue systematically ideas that come from others, particularly from those that they perceive as being different" (Reitzig & Sorenson, 2010, p. 3) Silo-Mentality and IOP are both evident within TINE I&M, despite the organizations attempts at eliminating them by bringing together FoU and Marketing, thus removing the physical barriers between the two and encourage cooperation. However, the invisible barriers related to silo-mentality and IOP are still very much at large in the new TINE I&M. Management can help the employees by giving them the resources and framework to change the organizational environment, but it is the people within the organization that must wish to and actively work to eliminate Silo-Mentality and IOP. Some of the respondents stated that they still felt a strong divide between the various fields of expertise. A respondent from RI made it very clear that they (RI) viewed themselves as a different unit than the rest of the innovation department, even wanting their own CEO who would see them and their needs separate from the rest of the innovation and marketing department. It was also apparent that respondents from RI felt that they had superior ways of doing things, but made no notion about wishing to share information or techniques with other parts of TINE I&M, showing a clear case of IOP and refusal to remove the barriers.

In addition to the divide between RI and EP, there was also an evident divide between those from marketing, and the researcher and developers from the old FoU, despite most of them now working under the same umbrella: EP. The new re-organization of the department aimed at having the two departments work closer together throughout the innovation process, from idea to launch. Nonetheless, there still appears to be a clear divide between the departments, with a great "us and them" mentality. This shows that although the reorganization was meant to eliminate silo-mentality and IOP, it is still very much at large in the organization.

In addition to hindering cooperation between departments, silo-mentality and IOP also has a direct impact on the organizations innovations. A high degree of *us vs them* can lead to people within subunits having "biased perceptions against ideas that emerge from other parts of the organization", thus potentially hindering ideas to be nourished into innovations (Reitzig & Sorenson, 2010, p. 1). Silo mentality also affects the communication, which is a big part of the climate and innovation. Talking and sharing is a vital part in innovation, both in the creativity process, and the implementation of ideas (Amabile, 1988; Linke & Zerfass, 2011; Damanpour, 1990, cited by Shipton et al., 2005, p. 120). It was evident in the study that idea sharing is only done within projects. Thus, if a person is not a part of a pre-established project group, it is difficult to share their ideas. The combination of this lack of idea-sharing platform and the clear presence of both Silo-Mentality and IOP is potentially hindering innovation in TINE I&M. Van de Ven (1896, cited by Amabile, 1988, p. 126) states that innovation is not only about developing and implementing new ideas, but it is also about sharing these ideas with others. This is also supported by Damanpour (1990, cited by Shipton et al., 2005, p. 120), who states that in order to become implemented, "ideas and knowledge need to be communicated through the organization". Kanter (2000) further states that interpersonal

communication is “positively related to the innovation rate” (p.100), as it can bring around new perspectives on the opportunities or approaches available.

To encourage idea-sharing and intra-organizational communication, TINE I&M should focus on bringing people from various fields of expertise together, for example in workshops or team-building. It is also important to create a sense of *us as a whole*, instead of a *us vs them* mentality. One way of improving this, is to create a joint vision for the new TINE I&M. Another way of improving this was outlined by one of the participants, who stated that simply being included in the mailing list from marketing had given her new incentive to be innovative, as she now felt she had the same information and opportunity for finding new potential areas for innovation that marketing had. Team-building sessions or workshops should be brought out to not only create a sense of community, but to highlight and introduce the skills and expertise of the various people within the department.

Silo-mentality and IOP has also resulted in a lack of awareness of other units (and individuals) skills and knowledge, thus not utilizing the human resources available to the full extent. To improve this, TINE I&M should allow people to do secondment, i.e. “the temporary relocation of a specific member of the workforce of an organization whom for a period of time is borrowed by either another organization or a different part of the same organization” (Hamilton & Wilkie, 2001, p. 316). Secondment encourages “the sharing of ideas and cross-fertilization” (Hamilton & Wilkie, 2001, p. 316), and is identified as enhancing communication (Tidd et al., 2005). Pelz & Andrews 1966 (cited by Kanter, 2000, p. 99) stated that “the most productive and creative ones were those who had more contacts outside their fields, who spent more time with others who did not share their values or

beliefs". The use of secondment could help provide an outside view on issues of the departments and would also help individuals get a stronger sense of the broader strategic perspective on the innovation process, as they would get insight into more parts of the process. Thus, the use of secondment might bring about mutual insight and respect for the various unit's knowledge and abilities.

4.5. Reliability and Validity

Despite the relatively small sample, the interviews provided data saturation, and adequately answered the research questions (B. Marshall, Cardon, Poddar, & Fontenot, 2013; M. N. Marshall, 1996). The sample also consisted of "participants who best represent or have knowledge of the research topic" (Morse, Barrett, Mayan, Olson, & Spiers, 2002, p. 18). Due to these factors, the sample is estimated to be valid. The study does not claim to have identified the *solid truth* about the areas for improvement, but merely to identify some areas where TINE I&M could benefit from improvement. The study aimed at offering an honest and fair review of the participants perceptions (Neuman, 2014). To avoid preconceived notions from the researcher, the interview guide was developed to allow participants to answer to open-ended questions, such as *what do you think is the reason for failed innovations*, instead of questions such as *do you think bad communication is a reason for failed innovations* (Yin, 2004). The recorded interviews were also listened to multiple times, so as to avoid any misconceptions from the researcher, and direct quotes were used for reliability and transparency. The researcher had no existing ties to TINE I&M and was able to give an honest review without fear of any personal consequences. The researcher also had little existing knowledge of climate for innovation, and was thus able to go into the study with an open mind and without any preconceptions or biases (Tjora, 2012).

Due to the broad range of participants, it is expected that the findings can be generalized to apply to the whole of TINE I&M. It is also expected that similar findings would occur if a different researcher used the interview guide as the basis for interviewing a different sample of the same population as this study. However, it cannot be generalized to other departments within TINE, or any external organizations. Nevertheless, the interview guide could be adapted to explore climate for innovation in other organizations, and the areas outlined in this study could also be relevant in other similar organizations, i.e. the themes that emerged, such as Silo-Mentality, could be of interest for other organizations (Berg, 1998)

4.6. Limitations

Although the sample size is deemed satisfactory, the sample should have included more people from each role within the company, and there should have been a higher focus on investigating people working *on the floor*, i.e. product and technology developers. The majority of the sample within this study had higher roles in the company, and is thus deemed as not necessarily having the same concerns and issues as the product and technology developers. However, the possible participants were decided by the advisor from TINE, not the researcher. Despite requesting more product and technology developers, this was not provided. By contacting a previous participant, the researcher was able to get in touch with one more P&T developer.

The sample population being investigated has recently undergone big organizational changes, and everything is therefore still new. Thus, the findings from this study might not represent

the true organizational climate, as this is yet to be established. This also entails that the findings from this study might not be relevant in a few months' time.

There were also limitations in regards of the researcher. Firstly, there was only one researcher, which resulted in a one-sided analysis of the qualitative interviews and the emerging issues. Having two or more researchers would have allowed the transcripts to be analyzed by the method of *triangulation*, where two or more researchers would "read and analyze the same set of transcripts, and then compare notes. If the notes agree, then the information is credible" (Guion, Diehl, & McDonald, 2001, p. 3). Secondly, the researcher lacks experience in qualitative interview setting. A more experienced researcher might have acquired better quality responses and analysis. This was especially evident when reading the transcripts, which highlighted that the researcher was often unable to ask sufficient follow-up questions. Some of the respondents were difficult to *get in the flow*, and only provided short and concise answers without wanting to elaborate. A more experienced interviewer might have known how to get certain participants to provide higher quality answers. For example, after listening to the recordings of the first two interviews, it was clear that the researcher had a tendency to interrupt interviewees before they were finished, as the researcher was uncomfortable with pauses in the conversation. For the remaining interviews, the researcher tried to allow longer breaks between sentences, allowing the participants to say what they wanted.

The interviews were conducted in Norwegian, both for convenience for the subjects, and to make the analysis easier. However, while translating quotes into the paper, some concepts might be lost in translation, or slightly skewered. This could have been avoided by conducting the interviews in English, but it was evaluated that this would be more damaging to the

validity of the answers, as participants might not have been confident or fluent in English. Seeing as the researcher has professional competence in both Norwegian and English language, it was decided that the possibility for error was smaller when the researcher translated statements, than if the participants had to respond in English.

As a result of changes in TINE I&M, the scope and aim of the assignment was altered multiple times. As such, once the main RQ of the study had been set, there was limited time to develop the research instrument. Thus, the *first and best* literature was used as the basis for the interview guide, and the interviews were conducted shortly after. However, after further sampling of secondary data in relation to the analysis of the findings, other studies were identified. These studies were used in the analysis of the data, but had these been identified before, it could have improved the interview guide and consequently the results of the study.

To increase the validity, the transcribed documents could have been sent back to the participants for confirmation of its accuracy. However, this was not done because of time constraints on both the researcher and the participants side. A pilot-study should also have been conducted to further develop the interview guide.

5. Conclusion and Further Studies

The re-organization of TINE I&M was done to improve their innovative efforts but has only partly succeeded. It was clear that they aimed at removing barriers between the different units involved in innovation, but there are still issues with silo-mentality, communication, and collaboration. The study also highlights the need for a strong vision for TINE I&M, and a

change in their innovation process, where more units are involved at an earlier point in the process. There is also a lack of allocated time to be creative and innovative, which has proven difficult to change. However, based on the analysis of the climate, and the reorganization, TINE I&M is deemed fully capable of tackling the issues at hand, and can thus improve their climate for innovation by making small changes within the areas identified in this study. It is worth noting that while TINE I&M can make changes to their environment and climate, they need to get their employees to accept the changes and incorporate them into their culture in order for the changes to have an effect.

Due to the short time frame since the changes had been implemented, the changes had not all been adapted and accepted by the employees in the new TINE I&M. Thus, a new study should be done at a later point when the new organizational structure has settled. It would also be beneficial for TINE I&M to do a quantitative study on the areas highlighted in this study, to not only check if there is any merit to the findings of this study, but also to see to what effect this affects the innovative efforts of the employees and to identify causes or correlations. It would also be interesting to conduct the same study on a similar organization, to see if there were any similarities in issues concerning climate for innovation.

Sources

Ahmed, P. K. (1998). Culture and climate for innovation. *European journal of innovation management, 1*(1), 30-43.

Amabile, T. M. (1988). A model of creativity and innovation in organizations. *Research in organizational behavior, 10*(1), 123-167.

Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of management journal, 39*(5), 1154-1184.

Anderson, N. R., & West, M. A. (1998). Measuring Climate for Work Group Innovation: Development and Validation of the Team Climate Inventory. *Journal of Organizational Behavior, 19*, 235-258.

Ashkanasy, N. M., Broadfoot, L. E., & Falkus, S. (2000). Questionnaire Measures of Organizational Culture. In N. M. Ashkanasy, C. P. M. Wilderom, & M. F. Peterson (Eds.), *Handbook of Organizational Culture & Climate* (pp. 131-145). California, USA: Sage Publications, Inc. .

Ashkanasy, N. M., Wilderom, C. P. M., & Peterson, M. F. (2000). *Handbook of Organizational Culture & Climate*. California, USA: Sage Publiscations, Inc.

Benaquisto, L., & Given, L. (2008). The SAGE Encyclopedia of Qualitative Research Methods. *New York: Sage*.

Berg, B. L. (1998). *Qualitative Research Methods for the Social Sciences,. 2007* (3rd ed.). MA, USA: Allyn & Bacon.

Bessant, J., & Tidd, J. (2011). *Innovation and entrepreneurship* (2nd ed. ed.). Chichester: Wiley.

Bodell, L. (2014). Four Simple Steps For Defining Your Company's Innovation Vision. Retrieved from Forbes.com website:

https://www.forbes.com/sites/groupthink/2014/11/07/four-simple-steps-for-defining-your-companys-innovation-vision/#362a76e87357

Boyce, C., & Neale, P. (2006). Conducting in-depth interviews: A guide for designing and conducting in-depth interviews for evaluation input.

Buckler, S. A. (1997). The spiritual nature of innovation. *Research-Technology Management, 40*(2), 43-47.

Burnard, P. (1991). A method of analysing interview transcripts in qualitative research. *Nurse education today, 11*(6), 461-466.

Christoffersen, L., Johannessen, A., Tufte, P. A., & Utne, I. (2015). *Forskningsmetode for Sykepleierutdanningene*. Oslo: Abstrakt Forlag AS.

Cilliers, F., & Greyvenstein, H. (2012). The impact of silo mentality on team identity: An organisational case study. *SA Journal of Industrial Psychology, 38*(2), 75-84.

Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative science quarterly*, 128-152.

Cooper, D. R., & Schindler, P. (2001). Business Research Methods. *McGraw, New York*.

Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of advanced nursing, 62*(1), 107-115.

Francis, D., & Bessant, J. (2005). Targeting innovation and implications for capability development. *Technovation, 25*(3), 171-183.

Gill, P., Stewart, K., Treasure, E., & Chadwick, B. (2008). Methods of data collection in qualitative research: interviews and focus groups. *British dental journal, 204*(6), 291.

Guion, L. A., Diehl, D. C., & McDonald, D. (2001). *Conducting an in-depth interview*: University of Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, EDIS.

Hamilton, J., & Wilkie, C. (2001). An appraisal of the use of secondment within a large teaching hospital. *Journal of Nursing Management, 9*, 315-320. doi:10.1046/j.0966-0429.2001.00257.x

Hsieh, H.-F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative health research, 15*(9), 1277-1288.

Irvine, A., Drew, P., & Sainsbury, R. (2013). 'Am I not answering your questions properly?'Clarification, adequacy and responsiveness in semi-structured telephone and face-to-face interviews. *Qualitative research, 13*(1), 87-106.

Janssen, O., Van de Vliert, E., & West, M. (2004). The bright and dark sides of individual and group innovation: A special issue introduction. *Journal of Organizational Behavior, 25*(2), 129-145.

Jenner, B., Flick, U., von Kardoff, E., & Steinke, I. (2004). *A companion to qualitative research*: Sage.

Kanter, R. M. (2000). When a thousand flowers bloom: Structural, collective, and social conditions for innovation in organization.

Kaplowitz, M. D. (2000). Statistical analysis of sensitive topics in group and individual interviews. *Quality and Quantity, 34*(4), 419-431.

Koberg, C. S., Detienne, D. R., & Heppard, K. A. (2003). An empirical test of environmental, organizational, and process factors affecting incremental and radical innovation. *The Journal of High Technology Management Research, 14*(1), 21-45.

Kothari, C. R. (2004). *Research methodology: Methods and techniques*: New Age International.

Krippendorff, K. (1980). *Reliability*: Wiley Online Library.

Kvale, S. (2008). *Doing interviews*: Sage.

Lester, D. L., Parnell, J. A., & Carraher, S. (2003). Organizational life cycle: A five-stage empirical scale. *The International Journal of Organizational Analysis, 11*(4), 339-354.

Linke, A., & Zerfass, A. (2011). Internal communication and innovation culture: developing a change framework. *Journal of Communication Management, 15*(4), 332-348.

Lone, J. A., Bjørkli, C. A., Bjørklund, R. A., Ulleberg, P., & Hoff, T. (2011). Organizational climate and innovation in the Norwegian service sector. *Scandinavian Journal of Organizational Psychology, 3*(1).

Marshall, B., Cardon, P., Poddar, A., & Fontenot, R. (2013). Does sample size matter in qualitative research?: A review of qualitative interviews in IS research. *Journal of Computer Information Systems*, *54*(1), 11-22.

Marshall, M. N. (1996). Sampling for qualitative research. *Family practice, 13*(6), 522-526.

Martins, E., & Terblanche, F. (2003). Building organisational culture that stimulates creativity and innovation. *European journal of innovation management, 6*(1), 64-74.

Mathisen, G. E. (2005). *Climates for Creativity and Innovation: Definitions, Measurement, Predictors, and Consequences*: Faculty of Psychology, University of Bergen.

Mathisen, G. E., & Einarsen, S. (2004). A Review of Instruments Assessing Creative and Innovative Environments Within Organizations. *Creativity research journal*, *16*(1), 119-140.

McLean, L. D. (2005). Organizational culture's influence on creativity and innovation: A review of the literature and implications for human resource development. *Advances in developing human resources*, *7*(2), 226-246.

Milena, Z. R., Dainora, G., & Alin, S. (2008). Qualitative research methods: A comparison between focus-group and in-depth interview. *Annals of the University of Oradea, Economic Science Series*, *17*(4), 1279-1283.

Morse, J. M., Barrett, M., Mayan, M., Olson, K., & Spiers, J. (2002). Verification strategies for establishing reliability and validity in qualitative research. *International journal of qualitative methods, 1*(2), 13-22.

Neuman, W. L. (2014). *Social research methods : qualitative and quantitative approaches* (7th ed. ed.). Harlow: Pearson.

Nofima. (2017). *Fra innsikt til effekt*.

Normann, R. (1977). *Management for growth*: John Wiley & Sons.

Novick, G. (2008). Is there a bias against telephone interviews in qualitative research? *Research in nursing & health, 31*(4), 391-398.

Opdenakker, R. (2006). *Advantages and disadvantages of four interview techniques in qualitative research.* Paper presented at the Forum Qualitative Sozialforschung/Forum: Qualitative Social Research.

Patterson, M. G., West, M. A., Shackleton, V. J., Dawson, J. F., Lawthom, R., Maitlis, S., . . . Wallace, A. M. (2005). Validating the organizational climate measure: links to managerial practices, productivity and innovation. *Journal of Organizational Behavior, 26*(4), 379-408.

Reitzig, M. G., & Sorenson, O. (2010). Intra-organizational provincialism.

Rosenblatt, P. C. (1964). Origins and effects of group ethnocentrism and nationalism. *Journal of conflict Resolution, 8*(2), 131-146.

Rotfeld, J. H. (2000). The Textbook Effect: Conventional Wisdom, Myth, and Error in Marketing. *Journal of Marketing, 64*, 122-127.

Shipton, H., Fay, D., West, M., Patterson, M., & Birdi, K. (2005). Managing people to promote innovation. *Creativity and innovation management, 14*(2), 118-128.

Story, V. M., Daniels, K., Zolkiewski, J., & Dainty, A. R. (2014). The barriers and consequences of radical innovations: introduction to the issue. *Industrial Marketing Management, 43*(8), 1271-1277.

Sturges, J. E., & Hanrahan, K. J. (2004). Comparing telephone and face-to-face qualitative interviewing: a research note. *Qualitative research, 4*(1), 107-118.

Tidd, J., Bessant, J., & Pavitt, K. (2005). *Managing innovation : integrating technological, market and organizational change* (3rd ed. ed.). Chichester: Wiley.

TINE. (2018a). Visjon og Verdier. Retrieved from https://www.tine.no/om-tine/organisasjonen/visjon-og-verdier

TINE. (2018b). Vår tradisjon er å fornye oss. Retrieved from http://www.tine.no/256383/v%C3%A5r-tradisjon-er-%C3%A5-fornye-oss

Tjora, A. (2012). *Kvalitative forskningsmetoder i praksis*: Gyldendal akademisk.

West, M. A., Hirst, G., Richter, A., & Shipton, H. (2004). Twelve steps to heaven: Successfully managing change through developing innovative teams. *European Journal of Work and Organizational Psychology, 13*(2), 269-299.

Yin, R. K. (2004). *The Case study anthology*. Thousand Oaks, Calif: Sage.

Appendices

Appendix A: Interview Guide

Dette intervjuet er en del av min Master oppgave om innovasjon ved Hotellhøgskolen på Universitet i Stavanger. Master oppgaven er skrevet på oppdrag fra TINE Innovasjon og Marked og Virkemidler for Regional Innovasjon. Formålet med intervjuet er å avdekke et nåtidsbilde av innovasjonsklimaet i TINE Innovasjon og Marked. Intervjuet er anonymt, og oppgaven vil bli båndlagt i fem år fra publiseringsdato. For å få mest utav intervjuet vil jeg gjerne ta opp intervjuet. Opptaket vil bli slettet så snart det har blitt transkribert.

Godtar du at det blir tatt opptak av intervjuet?
Godtar du at resultatet av dette intervjuet blir brukt som en del av master oppgaven?

Si ifra dersom det er spørsmål du ikke vil svare på underveis, eller hvis du ikke forstår spørsmålene. Det er også mulig å svare på enkelte spørsmål «off the record» dersom det er ønskelig.

Sample Spørsmål (not recorded)

Rolle(r) i selskapet

Ansiennitet

Utdanning

Hoveddel (recorded)

Hva er visjonen til TINE Innovasjon og Marked?

- Er dette en forståelig visjon for deg?
- Er det klart uttrykt hvordan dere som ansatte skal hjelpe TINE Innovasjon og Marked å nå denne visjonen?

- Viss ja, forklar i grove trekk hvordan?

Hvordan ville du du beskrevet den organisatoriske strukturen i TINE Innovasjon og Marked? (Flat – Hierarki)

Hvordan er mulighetene for å samarbeide/prate med personer fra andre avdelinger og lignende?

Blir det lagt opp plattformer hvor ansatte kan dele og/eller diskutere ideer?

Hvordan blir en ide kommunisert fra opphavspersonen(e) og til andre i TINE Innovasjon og Marked?

Hva betyr ordet innovasjon for deg? (Definer Innovasjon)

Radikal innovasjon?

Hva kan/bør gjøres for å få mer radikal innovasjon?

(Hvilken type innovasjon jobber du mest med? (Radikal, komplisert, inkrementell))

Tenk på innovasjoner som har vert vellykket hos TINE, hva tror du gjorde dette vellykket?

Tenk på innovasjoner som ikke har vert vellykket, hva tror du er grunnen til at denne ideen ikke fungerte?

Hva skjer hvis et prosjekt ikke går som planlagt?

Hva skjer hvis en ansatt gjør en feil som får konsekvenser for prosjektet

Hvordan foregår en normal innovasjonsprosess hos TINE Innovasjon og Marked?

Har dere arbeidsgrupper som jobber på ulike prosjekter?

- Hvem setter opp disse gruppene?

- Pleier gruppene å være sammensatt av personer fra like eller ulike bakgrunner, arbeidsområder, osv.?
- Er det samarbeid mellom ulike grupper?

Hvem bestemmer hvilke prosjekter som skal jobbes videre med?

Blir det lagt opp til idemyldring etc. av TINE Innovasjon og Marked?

Hvor kommer de fleste ideene fra?

Blir ansatte tildelt tid til å være innovative/kreative?

- Blir ansatte gitt mye rom for å være fleksible og ta sjanser/jobbe på egne prosjekter, eller er det et kontrollert miljø med høy struktur og orden?
- Blir ansatte oppmuntret til å ta sjanser for å komme fram til «det nye store»?

Hva tror DU er viktigste faktoren til innovasjon i TINE FoU?

Avsluttende kommentar?

Takk for at du tok deg tid til å delta på intervjuet. Dersom ønskelig kan du få utlevert transkribert intervju for ettersyn, og kopi av ferdig analyse.

Appendix B: NSD overview

http://www.nsd.uib.no/personvernombud/en/help/faq.html (04.05.2018)

Denne siden på norsk

Frequently asked questions

- I will not publish personal information, do I still need to notify the project?
- How can a project be carried out without being subject to notification?

  In order for a project not to be subject to notification, all electronic data processed through the entire research process has to be anonymous . In addition, no sensitive data can be linked to directly identifiable personal data, nor via code or reference number referring to a separate list of names (scrambling key).

  Here are some examples of methods that can be used:

  - In carrying out interviews and/or observation, data is recorded exclusively in the form of notes (not recordings). One must ensure that no names and no personally identifiable background information is registered in the data material.
  - There can be made audio recordings of interviews if the interview guide is designed in such a manner that no personal data will appear in the recordings. (NB! Voice combined with background information about the informant may in some cases be personally identifiable. When using audio recordings, this type of information has to be omitted or limited in such a way that individuals cannot be recognized in the data material.)
  - Paper surveys can be carried out, as long as neither names nor any sensitive personal data is registered.

Appendix C: Factors for Innovation at TINE I&M Table

	P1	P2	P3	P4	P5	P6
Structure				X	X	
Internal Cooperation and Communication	X	X	X	X		
External relations		X	X	X	X	
Open Innovation Towards Business Partners			X			
Being Curious and Take chances		X	X	X		X
Technology		X		X		X
Technology Push				X		
Design Thinking				X		
Understanding the Customer Perspective			X	X	X	X
Marketing Mix				X		X
Passion Projects		X	X	X		
Culture		X		X		
Management			X			
Project Leader	X	X		X		
The Right Person			X			
Interdisciplinary Work			X			
Thinking Big			X			
Knowledge and understanding of Colleagues			X			X
Implementation Force			X			
Long-term Process	X				X	
Timing	X	X				X

Prioritizing	X	X				
Good processes	X				X	
Knowledge/Competencies		X				
Involvement		X				

Appendix D: Perceptions on Innovation

	Perceptions on Innovation
P1	"It is about creating value. Because without value, without the value-withdrawal, it has nothing to do with innovation
P2	"Creating new services or products, creating new things, get it out on the marked, and succeed with it. Something that changes the world and makes things better. It's all about doing things a little better than you did yesterday. And it's about implementation, because it is not enough to just have an idea, you have to follow through"
P3	"It is about creating something that becomes a commercialization, but I also think that improvements can be elements of innovation. But, per definition it must be commercialized and realized, but you do have research-based innovation, where you rarely take it all the way. Because you are making the foundation for others, so it is not always easy to tell what it is. But a good commercialization is important if you are to see the results"
P4:	"Innovation is to create something new that gives value back to the organization, or whoever is innovating. It must be something that creates value, in terms of business or reputation. If it doesn't provide value back, it is not an innovation, it's just an idea"
P5	"Innovation is about creating new value"
P6	"It is about improving that which was before. An effectivization, improvement, an experienced increase in value. If we can do something better, faster, more resource efficient, more accurately, then it is an innovation"

Appendix E: Perceptions on Radical Innovation

	Perceptions on Radical (and Incremental) Innovation
P1	"Radical innovation is more about new business developments, and about new user needs, needs that the users might not know about today"
P2	"It is like, buying a food department store or something that goes in a new direction or work with new channels, and yeah, it is a lot more than just new products. Something completely new, with a strong twist in direction.
P3	"The biggest difference lies in how much risk you are taking. And by that, I mean how much will you accept that it won't become a success. In radical you take a big change, and it is not a definitive success. Incremental is to a big degree an expansion of the existing. It is very small steps, small things, small changes, while radical is something that really swings, something that is new for you, or of the client, or for the user, or for the situation"
P4	"If you use the picture of the train and the rocket, then we (incremental innovation) work in the train, and radical works on the rocket. For me, radical is about challenging the core, and do what the core cannot do. It is important that we work together, because we (incremental) need to stretch as well, but we will always be connected to the core, while they (radical) challenge that which is outside the core"
P5	"Radical innovation is something new outside of the corporation or company's core operations. It might not always be about something radical for the user, but for us as a company, the ideas might be radical. For example, if we are to have a new sales-channel, that would be radical for TINE. It is something we don't normally do, something we do not know how to do, and something that demands other types of competencies, you need a different business model, and you might have to create

	diverse projects teams from different areas of expertise, and perhaps external relations too. So that is radical…"
P6	"Radical innovation is something new that is supposed to bring an improvement. Those of us who work in market analysis tend to say that it is about needs; to uncover needs, and finding new solutions to needs. In a way it is about effectivization. Creating the car was in one way a radical innovation, but at the same time it was an improvement of something. It solves a problem in a different way; from horse to car. It is radical, not incremental, but it does solve the same problem. So, it does not necessarily have to be an improvement of something that was before, but a better way of solving a problem for the user. Incremental innovation in TINE is usually a new flavored yoghurt, a new muesli-mix, better texture, while a radical innovation is for example when TINE entered Salma. That's a radical innovation, it is when you do something that does not expand on something you had before"