Customer Knowledge and Innovation

A Master's Thesis exploring how companies can capture customer knowledge with the help of neuromarketing, social media and netnography and manage it for innovation purposes

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EXECUTIVE SUMMARY

The speed and magnitude of new innovations being presented to the world has increased so dramatically in the last twenty years that some have concluded that the world has entered a new economic era: the innovation economy. In this economy customers are more demanding, asking for more customized products and thus customer knowledge has become essential for the corporate success.

In this thesis we explore how organizations can capture customer knowledge with the help of three customer communication platforms; neuromarketing, social media and netnography and use it for innovation purposes. In this context, the thesis reviews how customer knowledge is attained from the three platforms in relation to innovation, with a knowledge management perspective. Several issues have been addressed in order to explore the utilization of the platforms for innovation and manage the knowledge gathered from customers. These issues construct the main research question "How can companies capture customer knowledge with help of neuromarketing, social media and netnography and manage it for innovation purposes?"

A qualitative exploratory research has been conducted with the aim of gaining both a defining and practical view of the platforms as sources of customer knowledge for innovation. The research is divided into three sections; an extensive literature review of knowledge and innovation management, expert interviews and multiple case studies from a practical perspective.

Firstly, the drivers behind customer knowledge management for innovation purposes are explored. Secondly, which kind of knowledge each platform provides is analyzed. Thirdly, the processes of attaining customer knowledge from the platforms are identified and finally the conditions necessary for utilizing the platforms are addressed. The main findings indicate that neuromarketing can provide customer knowledge that is ideal for usage in the later stages of the innovation process, especially for large established companies facing fierce competition. Furthermore, social media and netnography provide tacit and explicit knowledge that can be relevant at all stages of the innovation process and offer a holistic approach towards customers. The paper presents a managerial framework that can guide the exploitation of the platforms for innovation.

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1. INTRODUCTION

The following sections introduce the background of the study, i.e. the relevance of customer knowledge in relation to innovation, the problem definition and the purpose of the study following the research questions. Furthermore the scope and delimitations are presented. This section concludes with the structural overview of the paper.

1.1 Background

The drive to innovate has never been more crucial for corporate success as the dynamics of competition have shifted from that of gaining competitive advantage to managing innovation and change (Busacca, Cillo, & Mazursky, 2008; Tidd & Bessant, 2009). Innovation has become so important that today's economy has sometimes been called the 'innovation economy' (Davenport, Leibold, & Voelpel, 2006). Thus, the strategic management of innovation has become a core business process that companies need to prioritize.

In the innovation economy, the power of knowledge has been recognized as a crucial resource. Knowledge is the source of success for companies as innovations build on knowledge creation (Davenport, Leibold, & Voelpel, 2006; Hislop, 2009). Wherever the knowledge comes from; employees, the organization itself, the customers, competitors or partners, it needs to be managed within a firm in order to be of sufficient use. In this paper we focus on customer knowledge; knowledge from the customers and knowledge about the customers, and three evolving platforms that can provide this kind of knowledge. Customer knowledge is of special relevance today because the economy has become customer-driven, as customers are more empowered, networked and informed as a consequence of the technological advances and the widespread internet and communication accessibility we have experienced in the last decades.

On the one hand, knowing what customers want is important for success and on the other hand making use of what the customers know adds value to the internal knowledge base of the company. Co-creating with the customer is one form of taking advantage of both these customer knowledge perspectives, i.e. with co-creation the customer can not only influence the innovation process by directly communicating

his or her own preferences and likings, but also in this process the company can make use of the customer's knowledge base. The essence of the three customer communication platforms this paper concentrates on - neuromarketing, social media and netnography - is customers sharing their feelings, thoughts and opinions and as such can be a valuable source of customer knowledge. The platforms thus offer companies the possibility of reaching this customer knowledge and make use of it in their innovation efforts.

1.2. Problem Definition

When companies invent a new product, new technology or a more efficient way of working it does not automatically imply that they are producing a successful innovation. Without the understanding of what its customers want a clever technological invention can quickly turn into a failure. Thus customer knowledge is a crucial piece of the puzzle when it comes to successful innovations and the imperative of communicating and interacting with customers becomes pivotal. Furthermore, attaining tacit knowledge of and from customers can be highly beneficial when it comes to innovations as this kind of knowledge is often unique, rare and inimitable.

The three customer communication platforms can contain a vast base of knowledge about and from customers but in this case as often, the more is not always the better. Though the advantage with the magnitude of knowledge available companies are provided with an opportunity to understand their customers better, the problem becomes sorting out the relevant knowledge, disregarding inconsequential or insignificant knowledge. Another problem that arises is how companies should communicate, encourage and stimulate their customers to share relevant information through the social media and netnography platforms. The neuromarketing platform varies in that sense from the other two as companies usually recruit customers to neuromarketing studies. Yet, all three platforms offer a source of customer knowledge but the challenge becomes how to efficiently and effectively gather, manage and share this knowledge throughout the company. Furthermore, the conditions that are preferential for companies to fulfill in order to make use of the platforms for the purpose of innovation need to be identified.

1.3. Purpose of the Study and the Research Question

The fields of knowledge- and innovation management have been studied considerably over the last decades and the three customer communication platforms have received substantial interest over the last few years. However, there has been limited research on the connection between these perspectives, i.e. the study of the platforms from a knowledge management perspective with the intention of use in corporate innovation.

The overall purpose of this paper is to explore customer knowledge in relation to innovation with a knowledge management perspective. Furthermore, the study explores the three customer communication platforms - neuromarketing, social media and netnography - and how they can be used to attain customer knowledge that can be of use in corporate innovation. The study aims to develop a managerial framework that can guide managers in their efforts of exploiting the platforms for the purpose of generating customer knowledge for corporate innovation. The research is built upon one main research question followed by four sub questions:

How can companies capture customer knowledge with the help of neuromarketing, social media and netnography and manage it for innovation purposes?

- ∞ What are the drivers behind customer knowledge management for innovation purposes and how does customer knowledge benefit corporate innovation?
- ∞ What kind of knowledge can be captured from the three platforms?
- ∞ What are the processes for taking advantage of customer knowledge gained from the platforms and using it in the innovation process?
- ∞ What are the conditions that should be in place in order to make sufficient use of the knowledge gained from the three platforms?

1.4. Scope and Delimitations

The scope of the research is limited to understanding the customer knowledge gained through the three customer communication platforms and thus does not focus on other sources of customer knowledge.

Also, the case studies performed focus on three industries - the fast-moving-consumer-goods, retail and experience industries - and thus the conclusions drawn might not relate to companies in other industries, although conclusions from this research can in some cases be suggestive for other industries.

The research does not intend to cover all perspectives of knowledge- or innovation management as the scope of such research would be far too extensive. Our research here is limited to those concerned with the three customer communication platforms. The perspective taken in the research is broad, introducing a number of aspects concerned with innovation and customer knowledge and as such the depth of the analysis is strained. But as mentioned above, there has been limited research on the connection between knowledge- and innovation management in connection to the three platforms and thus we deemed a broad perspective necessary. Furthermore, as the research is based on interviews with eleven experts and professionals, the conclusions drawn are dependent on their personal knowledge, insights and viewpoints.

1.5. Structural Overview

The following chapter presents the architecture of the thesis. Chapter one presents the background of the research, why we consider the research important and presents the research questions. It also discusses the methodological focus of the study and its scope and limitations. Chapter two describes the methodology we used in the research, explains and justifies our choices of methods. Chapter three introduces and reviews the existing literature on the topics related to our study. It starts with a reflection on knowledge and knowledge management, then presents and discusses literature on the three customer communication platforms, after which there is a review of the literature on innovation management. The chapter concludes with our own reflections of the existing literature on these topics. Chapter four presents the empirical research based on the interviews we conducted with the experts of each platform as well as the innovation experts. Here the focus is on the experience of these experts with each platform and their advice and recommendations for the adoption of the platforms in innovation processes. We conclude with our own reflections of the expert interviews.
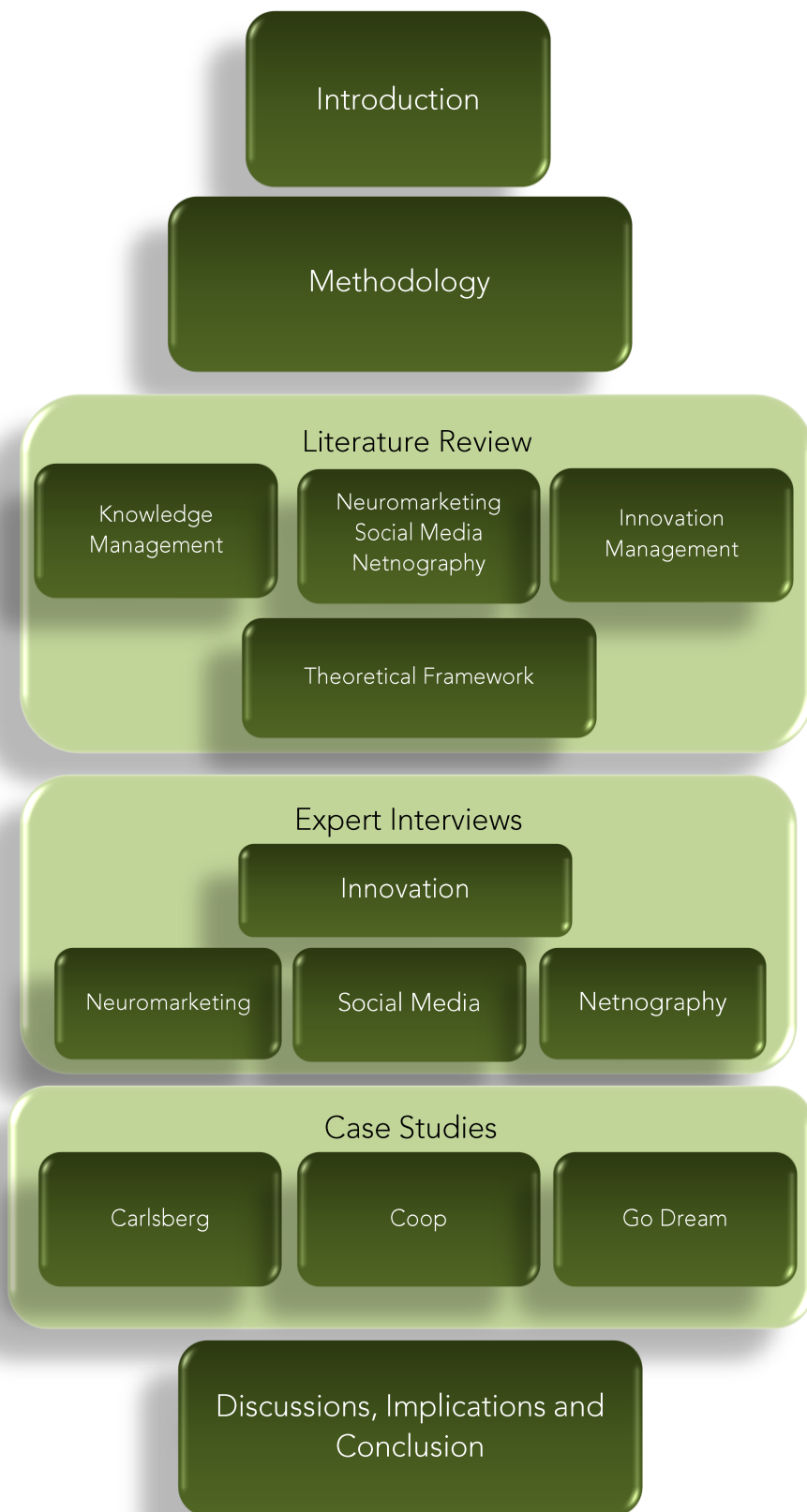
Figure 1: Structural overview

Chapter five presents the second part of the empirical research, based on the case studies we performed. The chapter is divided into subchapters for each company we studied and concludes with discussion and reflections of the case studies. Chapter six reflects on the results of the research and presents a managerial framework that can provide direction for managers in their pursuit of using customer knowledge in their innovation processes with help of the three customer communication platforms. The chapter concludes on the findings of the previous chapters, presents answers to the research questions, identifies limitations of the research and proposes suggestion for further research.

2. METHODOLOGY

> In this chapter the methodology used in the paper will be described, and the motivations and justifications for our choices explained. The chapter is divided into five main sections. The first section describes how we have designed our research and the processes we went through in doing so. In the next section we discuss the philosophical approach in the paper, defining our view of reality and how that relates to our research. The third chapter discusses research strategy, qualitative research and the case study strategy in particular. The fourth section explains the data collection process and lastly, the arguments for the quality of the research will be presented, mainly the validity and reliability of the research.

2.1. Research Design and Process

A research design provides the framework and overall plan for the collection and analysis of data that is required to answer the research question (Bryman & Bell, 2007). "The function of a research design is to ensure that the evidence obtained enables us to answer the initial question as unambiguously as possible" (De Vaus, 2001, p. 9). In other words, it is the plan of how we will gather information and which techniques will be used for analyzing it in order to answer the research questions the paper focuses on. The research design will therefore have a great influence on the outcome of the research and as such we put large emphasis on choosing the appropriate design for the research as well as explaining the methodology behind it.

The research process started out as a single idea of exploring the how companies can make use of evolving customer communication platforms for their innovation efforts. We had been interested in researching the effect of customer knowledge for the innovation process for some time, and together with our academic supervisor we discussed the idea of connecting customer knowledge gained through the three platforms of interest and innovation, and developed the scope for the research. The next step in the process was gathering as much information about the subject as possible, through scholarly articles, books, internet databases such as Ted, corporate web pages, etc. in order to gain a deeper foundational understanding of the subject.

There are three main classes of research design; exploratory, descriptive and causal design. Determining which class is relevant for a research depends on the problem structure (Ghauri & Grønhaug, 2005). We chose an exploratory research design for several reasons. Firstly, the nature of our topic is very dynamic; the platforms depend on relatively new technology and trends which are in constant development. Secondly, there has not been much empirical and conceptual research done on our subject. Although each platform, as well as knowledge and innovation management has been researched considerably, the questions we propose with connecting these concepts together is lacking from the literature. Thirdly, the issues of our research are complex in nature; customer knowledge for innovation purposes related to the latest developments in communication platforms has multiple factors that need to be investigated and understood on a deep level with an unbiased, open mind. Thus, we chose to conduct the research with an exploratory approach, aiming to investigate the relationship between the three phenomena and innovation and broadening the current understanding of this relationship.

When conducting exploratory research different sources of knowledge and methods for acquiring the knowledge are available and suggested in the methodology literature, e.g. literature search, interviewing experts and conducting focus group interviews (Saunders, Lewis, & Thornhill, 2009). Our exploratory research was done by literature search as well as interviewing experts. The intent of the literature review was to develop sharper and more insightful questions about the topic that hopefully could be answered with help of the empirical research. Firstly, we interviewed professionals working with the three customer communications platforms as well as consultants specializing in corporate innovation. These experts provided us with a deeper understanding of how the platforms are being used today, the potential the platforms provide as well as the connection between customer knowledge and innovation. Secondly, we interviewed managers in companies belonging to three different industries - the fast-moving-consumer-goods industry, retail and the experience industry - in order to gain insight into if and how these companies are using the platforms today and if there were any differences to be found between industries. The focus of the research was initially broad, as is often with exploratory research, but as the research progressed it became narrower.

2.2. The Research Philosophy

According to John Creswell, the philosophical assumptions, termed worldviews or paradigms, that the researchers bring to the study need to be identified as they influence the practice of the research (2003). These assumptions refer to the general orientation about the world and the nature of research that we as researchers hold. Our philosophical assumptions are shaped by our background, the academic discipline we belong to, our supervisor's contribution and our own past research experience. The core essence of this experience is that we view innovation as the absolute necessity and precondition for organizations to survive, prosper and succeed. Furthermore, we recognize that managerial processes, choices, etc. are largely based on interpretations and previous experience. Thus, we believe that managers as well as researchers and scholars are guided by a mindset – consisting of reflection, where past experiences influence how we perceive the present and future.

Daymon and Holloway (2002) define two dominant worldviews in social science research; the interpretive and the realist. These are contrasting views where the "essence of realism is that what the senses show us as reality is the truth: that objects have an existence independent of the human mind" (Saunders, Lewis, & Thornhill, 2009, p. 114). It assumes that reality is objective and that researchers can explain reality by gathering a large number of data and drawing assumptions based on regularities of the data. On the other hand, the interpretive view is subjective and "concerns itself with exploring the way that people 'make sense of their social worlds and how they express these understandings through language, sound, imagery, personal style and social rituals" (Deacon et al. 1999 as cited in Daymon & Holloway, 2002, p.4). It thus provides researchers with the opportunity of gaining a deeper understanding of their subjects by exploring the motivations and intentions. In order to perform interpretive research the researchers have to be actively involved, i.e. be in direct contact with their subjects and as such it often goes hand-in-hand with qualitative research whereas the realist view is more related to quantitative research.

The nature of our research is such that we deploy an interpretative view of reality. We believe that the nature of customer knowledge and how it can be used for innovation purposes - and moreover understanding how the three customer communication platforms can factor therein - is such a complex issue that the most effective way to understand it and draw justifiable conclusions is by gathering in-

depth knowledge from the people involved in the research. The experts we interviewed as well as the professionals from each case company provided us with this knowledge. We explored how they expressed their understanding and adoption of customer knowledge for innovation using the three platforms, through verbal discussions. By doing this, we gained a deeper understanding of the issues than we believe we would have by drawing conclusions based on regularities in a large number of data. We believe that there is no one holy truth or reality about how to manage customer knowledge for innovation purposes that can be measured objectively and simplified into law-like generalizations. Rather, our sense of reality is structured through our own background, values and knowledge together with those of our interviewers.

2.3. The Research Strategy

For researching the topics of this paper, we believe qualitative research is more effective than quantitative research. In order to gather in-depth knowledge about the research topic the research must have more flexibility and provide a chance of asking more detailed questions than a quantitative research can provide. Quantitative research typically uses mathematical, statistical or computational techniques for the empirical investigation of a topic, whereas qualitative research provides a deeper understanding, focused on the why and how of the topic (Denzin & Lincoln, 2005).

Qualitative research can take many forms, for example in-depth interviews, observations and grounded theory. Our research is, as previously mentioned, an exploratory research, and as such may employ different research strategies, but guided by the research question and objectives we assessed the case study strategy to be the most appropriate and effective to serve our purpose. In addition to the case study we interviewed experts - experts in neuromarketing, social media, netnography and innovation - who provided us with a better understanding of the methods, challenges and advantages, practicalities and further the opportunities presented by using the platforms for innovation purposes. Gathering this expert knowledge together with the case studies and combining the knowledge gained from both sources deepened understanding of the issue.

The case study was performed by semi-structured, in-depth interviews. "Individual in-depth interviews are non-directive or semi-structured interviews in which the respondent is encouraged to talk about the

subject rather than to answer "yes" or "no" to specific questions" (Schmidt & Hollensen, 2010, p. 89). With some of the interviews (e.g. the interview with Gonzalo Viera, who took us on a tour through the offices of Carlsberg's Insights Department and demonstrated some of their work processes) we could also gather knowledge through observation. Additionally, we gathered tacit knowledge from the interviews through other observations, such as observations on physical appearance and posture of the interviewees, signaling their feelings, attitudes and ideas from the things they did not necessarily say in the interview but rather implied or indicated. The observations thus provided us with tacit knowledge in addition to the affective and cognitive aspects of their responses.

2.3.1. Case Study as a Research Strategy

A case study is, according to Yin, an empirical inquiry that is used to add to the researchers' knowledge of certain phenomena and is "…the preferred strategy when "how" or "why" questions are being posed, when the investigator has little control over events, and when the focus is on contemporary phenomenon within some real-life context" (Yin, 2003, s. 1). This is very much in line with the problem case of this paper as it aims to understand *how* customer knowledge gained from the platforms is, or can be, used for innovation. We as investigators have no control over the events, are pure spectators, and the phenomenon is modern with real-life context. The case study strategy is a comprehensive research strategy that relies on multiple sources of evidence, where the data converges in a triangular fashion where benefits from prior research and theory can guide data collection and analysis (Yin, 2003). Our analysis of how managers within the three case companies understand and act on knowledge for innovation has been inspired by our literature analysis and interviews with experts, preceding the case analysis.

We chose to do a multiple case study as we are studying three different platforms and each platform is represented by different experts. We also wanted to study how companies from different industries relate to customer knowledge gained through the platforms in relation to innovation. We wanted to find out whether there is an observable difference between industries, mainly because what may apply to one industry may not apply to another, but also because it might provide the chance for implications from one industry to be transferred and used in another.

2.3.2. Unit of Analysis and Case Selection

The unit of analysis is the basis for the case; it can e.g. be an individual person, an event or an organization, but the key issue is that the study should only ask questions about the unit of analysis and the sources of evidence and the evidence gathered are determined by the boundaries that define the unit of analysis (Yin, 2003). The units of analysis for our case studies are the paths and experiences of the case companies when infusing customer knowledge into their innovation processes with a special focus on how neuromarketing, social media and netnography are, or can be, of use in these processes.

The selection of cases for a study should not be random. "Case selection must be determined by the research purpose, questions, propositions and theoretical context" (Rowley, 2002, p. 19), but constraints to the case selection will also factor into which cases are chosen. These constraints might be accessibility, resources, time, etc. When selecting the cases for our research, we had the purpose of the research as the frame of reference for our selection criterion. Firstly, we did a literature study on the research topics and secondly we interviewed experts in the fields of these topics, those that are actually working with the three platforms on a day-to-day basis as well as experts that are working with innovation in general as their main profession. The purpose of these interviews was to understand the issues that may rise when connecting the platforms to innovation. Thirdly we conducted three separate but constrained company case analyses; constrained in the sense that sources for information in the cases has been limited to interviews with five key informants. The criterion for the case studies of the three case companies was threefold. The purpose of these cases studies was firstly to understand how companies are using customer knowledge in their innovation process today, and secondly, to know if and then how the companies are using the platforms today - and if not, how they could benefit from using them, and thirdly if there were any differences between industries. We first decided which companies we considered interesting to look at and then approached the appropriate managers within each company by sending them either an e-mail, a message on LinkedIn or in some cases we called them directly. The responses were mixed, some of those we wanted to talk to were unavailable, e.g. Eric von Hippel, (an MIT Professor who has extensive knowledge on customer knowledge in relation to innovation), whose response to our interview request was "I am hiding away writing a book and am turning down all requests in order to focus on that - even worthy ones like yours!" and Robert V. Kozinets, the creator of the research method of netnography did not reply to our interview request. We

were however very fortunate to receive positive responses from experts who had extensive knowledge on our fields of study, e.g. a neuropsychologist who has been called the father of neuromarketing, a management consultant who has been successfully producing innovations with help of netnography for some years, a university professor who specializes in social media, and consultants from Ideo, a global leading innovation company. We will present the profiles of these experts in Chapter 2.3.1. (Interviews with Experts). The resulting interviews provided the valuable knowledge and insights we had hoped for and contributed to building the following case studies.

2.3.3. Advantages and Criticism of Qualitative Research and the Case Study Method

For our research, a qualitative approach provided many advantages over quantitative. First of all, as qualitative research is based on words rather than numbers, it provided more in-depth information about how the platforms can be utilized for innovation. Qualitative research is more flexible and can provide a more holistic focus; for example, when the informants touched upon something that we assessed as important for the research we were able to follow up with more detailed questions. There is however, also a disadvantage to this approach as the words must be interpreted by us and thus could become subjective to our interpretation.

Qualitative research also aims to capture processes that take place over time rather than a static moment and as such can provide greater context (Daymon & Holloway, 2002). This was very advantageous for our research because studying how customer knowledge can be gathered through the platforms and used for innovation needs to be considered in the context of the companies' innovation processes, the context of each industry, etc. Thus, studying a static moment in this regard could mean that important aspects of the processes could be omitted.

Qualitative research has however been criticized for being difficult to replicate, provide results that cannot easily be generalized and lack transparency (Daymon & Holloway, 2002). We have attempted to address these issues by using methods that are described in Chapter 2.5 (Quality of the Research) that increase the validity and reliability of the research.

One of the major strengths of the case study research strategy is the possibility of using multiple sources of evidence, because any findings or conclusions become much more convincing if they are based on different sources of information (Yin, 2003). Data triangulation is the method of using different data gathering techniques within the same research in order to increase the validity of the study (Guion, Diehl, & McDonald, 2002). In our thesis we use multiple data sources, which can be categorized as primary data on the one hand and secondary data on the other. The primary data we use are interviews and observations that have been performed by ourselves, and the secondary data we use consists of the literature related to knowledge management, innovation management, each of the platforms, etc. in the form of books, articles, web pages and reports. Combining primary and secondary data sources further strengthens the data triangulation and decreases any intrinsic biases or prejudices we as researchers might have (Yin, 2003).

2.3.4. Deductive, Inductive and Abductive Reasoning

"Reasoning is the process of using existing knowledge to draw conclusions, make predictions, or construct explanations. Three methods of reasoning are the deductive, inductive, and abductive approaches" (Butte College, 2013). The inductive approach is when a researcher starts out with a number of single cases, observes a pattern form and generalizes based on that pattern - while a deductive approach proceeds from a general rule and explains a single case through this rule (Alvesson & Sköldberg, 2009). The abductive approach however is a mixture of the two; like induction it takes a point of departure from the empirical basis, but does not reject theoretical preconceptions (like the inductive approach does) and is in that respect closer to deduction. The abductive approach provides the chance of preceding the analysis of the empirical research with previous theoretical studies in the literature that can act as inspirations for the discovery of patterns that bring understanding (Alvesson & Sköldberg, 2009, p. 4). This is exactly what we have done in this paper. We started with a literature review, and instead of rejecting the theoretical preconceptions we found in the existing literature, we used them to build our theoretical framework. The framework took a knowledge management perspective towards innovation, defining according to the literature the key aspects of each of the three platforms in relation to innovation. This framework in turn acted as an inspiration for the empirical research, for example by directing the design of our interview guide, and guiding us to where there were gaps in the existing literature and hence where our research could contribute. Also, instead of

using the theoretical framework as a general rule to explain our empirical research with, we used the empirical research as a point of departure; first the interviews with experts and then the case studies, which we used to develop new theoretical propositions. As the empirical research developed, we reciprocally adjusted and refined the theoretical framework we had built from the literature. Alvesson and Sköldberg claim that abduction reasoning provides a deeper perception of the research issues because of its inclusion of understanding, whereas induction and deduction are shallower approaches (Alvesson & Sköldberg, 2009, p. 4)

2.4. Data Collection

The following sections discuss how we performed our data collection, which issues we focused on and why and how the data sources were found to be relevant to our research. We used primary data, consisting of the in-depth interviews we performed and observations as well as secondary data. The primary data used in the research consists of the interviews that we took in June and July 2013. In total we interviewed eleven experts, both female and male, from eight different countries, all with very diverse backgrounds which we believe brings value to the research as the information gained does not come from one narrow source. The interviews were performed face-to-face, by phone or by Skype (or Google Hangout) and as such the opportunities of direct observations of the respondents differed.

2.4.1. Interviews with Experts

We conducted interviews with experts of each platform as well as innovation experts. This provided us with different perspectives of knowledge about the subject of how the platforms can be used, how they are being used and which possibilities they present for the innovation process. The experts of each platform have different backgrounds and knowledge bases and thus contribute divergent expertise to the research. David Lewis is the neuromarketing expert we interviewed. He has extensive experience in this field, has been called the 'father of neuromarketing' for his pioneering studies of analyzing brain activity for research and commercial purposes. He is the founder, Chairman and Director of Research of the Mindlab International, a company specializing in neuromarketing studies. The social media expert we interviewed is an Associate Professor at Copenhagen Business School and has been teaching courses focusing on social media and online communities since 2004. We also interviewed Nayeli

Tusché, who specializes in investigating customer requirements using the lead user method, creativity and netnography as a procedure of online community research. Additionally, we interviewed three innovation experts who work for Ideo, an award-winning international innovation and design company that helps organizations to innovate and grow. Appendix I provides a detailed review of their profiles and their contribution to the research. The table below summarizes information on the expert interviewees.

Date of Interview	Name	Company	Nationality	Type of Interview	Length of Interview	Field of Expertise
June 7th, 2013	David Lewis	Mind Lab International	French/ British	Semi-structured By phone	50 minutes	Neuromarketing
June 11th, 2013	Nayeli Tusché	Hyve	Mexican	Semi-structured By phone	50 minutes	Netnography
June 11th, 2013	Trent Huon	Ideo	Australian	Semi-structured By Skype	45 minutes	Innovation
June 14th, 2013	Hannah Zenk	Ideo	German	Semi-structured By Google Hangout	45 minutes	Innovation
June 14th, 2013	Vanessa Monogioudis	Ideo	Austrian	Semi-structured By Google Hangout	45 minutes	Innovation
June 28th, 2013	Niels Kornum	CBS	Norwegian	Semi-structured face-to-face	50 minutes	Social Media

Figure 2: The interviews with experts

2.4.2. The Three Company Case Studies

The other category of interviews concerned professionals working with innovation in three different companies of three different industries; the fast-moving-consumer-goods industry, retail and the experience industry. These interviews were conducted in order to gain a deeper insight into whether, and if so, how companies are using the platforms today for innovation purposes. Also, we wanted to know where they see the greatest potential within their companies for using the platforms, and if they anticipate any hindrances therein. In addition, we wanted to determine if there were any major differences to be found between industries, or if what we had found out when talking to the experts of the platforms (first category of interviews) could be transferred to each of the three industries.

We interviewed three key employees of Carlsberg. Firstly, Gonzalo Viera, the Director of International Insights at Carlsberg Group, who has been working for fast-moving-consumer-goods companies for the last fourteen years in Latin America and Europe. Secondly, we interviewed Finn Wulff, the Marketing Innovation Director at Carlsberg Denmark, who focuses on driving product innovation process within Carlsberg Denmark. And thirdly, we interviewed Håkon Langen, Senior Packaging Innovation Manager at Carlsberg Breweries. His focus is on working in collaboration with suppliers, inventors and internal departments to develop innovative packaging for Carlsberg's products.

Christian Skøtt Maltesen, the Head of Strategy Implementation at Coop was our interviewee in the retail sector. He leads business transformation efforts across the group, focusing on structural improvements within operating units

As for the experience industry, we interviewed Kristijan Thorstensen, who is the Marketing Director of Go Dream. His main focus has been on marketing strategy, positioning, consumer insights and concept development.

Appendix II provides a detailed review of the professionals we talked to and the table below summarizes the information about the professionals we interviewed for the three company case study.

Date of Interview	Name	Company	Nationality	Type of Interview	Length of Interview
June 19th, 2013	Gonzalo Viera	Carlsberg	Bolivian	Semi-structured face-to-face	60 minutes
June 19th, 2013	Finn Wulff	Carlsberg	Danish	Semi-structured face-to-face	40 minutes
June 14th, 2013	Håkon Langen	Carlsberg	Norwegian	Semi-structured face-to-face	50 minutes
July 23rd, 2013	Christian Skøtt Maltesen	Coop	Danish	Semi-structured By phone	30 minutes
July 26th, 2013	Kristijan Thorstensen	Go Dream	Norwegian	Semi-structured face-to-face	45 minutes

Figure 3: The interviews for the multiple case study

According to Daymon and Holloway, the essential attributes of interviews are that they be flexible and allow you to understand the perspectives of interviewees (2002). The interviews we conducted were semi-structured and therefore provided us with the chance to go into a deeper line of questioning if the

responses we received were interesting in regards to our research. We designed an interview guide (see Appendix III) that we used to lead the interview but allowed for alterations if the conversation was leading to something intriguing. We applied active listening to encourage responses from the interviewees, making sure not to ask leading questions. The interview guide ensured that we were collecting similar data from all informants - enforcing consistency in the research. Another feature of our interviews is that the data we gathered was phrased in the experts' own words, based on their own interpretations and experiences. The interviews were recorded with the interviewees' permission which gave us a chance to better focus on the interview itself, instead of continuously taking notes. Being two researchers taking the interviews, one played the role of the interviewer, while the other served as the facilitator, taking notes and providing additional support to the interviewer.

Another source of primary data for the research was direct observation during the interviews. Observation, conducted online or conventionally, concerns the systematic and ethical recording of what the researcher sees 'in the field' (Daymon & Holloway, 2002). The observations were informal but provided some deeper insights into the actual answers provided by the interviewees. Our observations also gave us a chance to evaluate their work surroundings which was interesting for the case companies as they differed substantially and consequently had an effect on how we experienced the companies, for instance as being modern or old-fashioned, technical, good organizational culture, and so on. Therefore, we gained a better understanding of the organizations.

2.4.3. Secondary Data

The secondary data is basically other researchers' data and/or research reports which we analyzed in light of our own research topic (Daymon & Holloway, 2002). Our process began with collecting and reading as many articles as we could manage about knowledge management, customer knowledge, innovation management, neuromarketing, social media, and netnography - looking especially for literature that connected two or more of these topics together. We searched the CBS library database as well as Google Scholar for articles or books by entering key words such as "Innovation and Social Media," "Innovation and Customer Knowledge," "Netnography and Innovation," etc. and selected articles from journals known for publishing quality articles. We tried to include articles that had been referenced widely in our selection, although, some very recent articles were also deemed interesting

and had not been referenced as often due to their recentness. We categorized all the articles we found interesting by subject and wrote a short summary of each article in a document, which we later used as an index of our readings (see Appendix IV). We gathered the secondary data collected from the CBS library or online academic journal databases and we used the literature we had from our Strategic Market Creation courses at CBS, the websites and social media pages of our interviewees and their companies, and other relevant electronic sources.

2.5. Data Analysis

Each interview we took was taped with the permission of the interviewee, which gave us a chance to transcribe the data we had gathered for further analysis. We transcribed all interviews, over 150 pages in total, which we then coded, categorized and analyzed. "Coding allows you to transform your data and reduce them in order to build categories; as major categories emerge, your theory evolves" (Daymon & Holloway, 2002, p. 22). We established five overall themes which basically consisted of the four aspects of the theoretical framework that we had developed from the literature (sources of customer knowledge, processes for customer knowledge management, categories of customer knowledge, and conditions for customer knowledge) in addition to innovation as the fifth overall theme. Under each theme we created more in-depth, interpretive codes for aspects within each theme that we assessed as being important for the research. The complete list of codes we used can be found in Appendix V. For example, the code CON-CULT represented issues the interviewees mentioned that concerned organizational culture as a condition for using customer knowledge in the innovation process. At the end of the coding process we had gathered all data relating to organizational culture into one cluster of data. Thus, the knowledge gained from the interviews was divided into sections of interest and different parts of the data could be drawn into these sections. We then compared the data within each cluster that had been gathered from the interviews with the theoretical assumptions and were able to draw conclusions and re-evaluate our theoretical framework.

2.6. Quality of the Research

Four measures have been commonly used to establish the quality of empirical social research, such as case studies (Yin, 2003). These are construct validity, internal validity, external validity and reliability. We discuss each of these measures of quality in the following chapters.

2.6.1. Construct, Internal and External Validity

With our research we aimed to capture knowledge on how customer knowledge gained through the platforms can be used in the innovation process. From the expert interviews we hoped to gain a better understanding on each platform; which categories of knowledge can be gained from the platforms, which processes can be used, which conditions have to be in place and why and how customer knowledge is important for the innovation process. With the case studies we further hoped to capture knowledge on the practical issues related to these aspects, and compare those between industries.

The construct validity has been widely criticized for case studies as critics point to the fact that insufficiently operational sets of measures and subjective judgments are often used to collect data (Yin, 2003). In order to respond to and limit the effect of these pitfalls of the case study method Yin provides three main tactics to be followed. Firstly, to use multiple sources of evidence during the data collection phase as we have done. Secondly, to establish a chain of evidence meaning that an external observer will be able to follow the origin and process of any evidence from the initial research to the ultimate conclusions and trace the steps in either direction (Yin, 2003). We have used these tactics in order to increase the construct validity of the study. Thirdly, Yin proposes that researchers have key informants review a draft of the case study report, which we have not done and thus decreases the construct validity of our study. However we have used the same interview guide for each interview in order to maintain consistency in the research, touching upon the same topics with each informant.

Internal validity, according to Daymon and Holloway, refers to the extent to which the findings of the study accurately reflect the aim of the research and the social reality of the informants (2002). We believe that the data gathered from the expert interviews as well as the case studies and the findings are very much in line with what we set out to research. The expert informants have extensive experience related to the platforms and could indisputably provide information and understanding about the

subject. The case studies, on the other hand, set out to study how these platforms were being used in practice - if and how they could provide customer knowledge that can be used for innovation. The informants in these studies provided data that allowed us to answer these questions. In order to increase the internal validity of our case studies we talked to three different informants within one company and compared the information provided, in order to certify the information. We also validated the information by looking at examples the informants presented in support of their claims (e.g. by looking at their Facebook page and witnessing how they actually use this method for retaining customer knowledge). As for the expert interviews, we investigated the backgrounds of the informants verifying their experience and expertise (for example by watching a twenty year old BBC television interview where the neuromarketing expert discusses his research, which confirms him having decades of experience when it comes to neuromarketing). The experts presented examples to support their claims and later we reviewed these examples and verified them. For instance the netnography expert took an example of how netnography helped in the innovation process of a stain-solution for clothing, and we varified her example by finding online the lead-users she described.

The external validity deals with the generalizability of the research findings. According to Yin, the external validity has been a major barrier in doing case studies, but performing more than one study will however increase the external validity (Yin, 2003). In order to increase the external validity of our results we have used multiple cases, testing the research problem between different industries as well as having interviewed three informants in one company. We have also tried to be descriptive of the case companies' situations so that the reader can evaluate if the case is similar to their own position.

Though generalizability can be tricky with case studies, we have taken several measures to increase the validity of our study and thus believe with reasonable certainty that the findings can be transferred to and used by other companies' innovation efforts. In addition, we believe that since the literature about the platforms in relation to innovation is limited our findings can provide the basis for further research of these issues.

2.6.2 Reliability

The objective of testing the reliability of a study is to ensure that if another researcher would follow the same procedures as we have, he or she would come to the same conclusions. The goal is to minimize

errors and biases of the study (Yin, 2003). We acknowledge that it is highly unlikely that the research could be performed and arrived at *exactly* the same results, as it is a qualitative study and respondents as well as researchers can have diverse stances and attitudes depending on the frame of mind and condition at the time the interview takes place. However, we have taken the available steps in order to increase the reliability of our research. For example, we have provided rich and accurate descriptions of the research strategy and processes. Also, the research consists of multiple studies which mostly confirm each other, providing richer evidence for the conclusions and minimizing the possibility of biases. We are thus reasonably confident that the descriptions of the procedures and methods we have used are very well qualified for a second researcher to follow and reach very similar conclusions.

3. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

> The literature review consolidates the literature on which the paper builds on. It aims is to create a foundation for the analysis and reflection of the research. It begins with a discussion of the term knowledge and knowledge management and its connection to knowledge creation. Subsequently, we present the theories behind the three platforms the paper focuses on; neuromarketing, social media and netnography. Then, the following chapter introduces the theories of innovation and innovation management with a focus on customer driven innovation, co-creation, and the relationship between customer knowledge and innovation. Finally, there is a chapter with reflections of the literature, in which the critical points from the previous chapters are outlined and summarized and a theoretical framework for the analysis will be drawn up.

3.1. Knowledge and Knowledge Management

The nature and scope of the concept of knowledge has been up for debate for centuries. In fact, the philosophical debate about the subject has acquired its own term: epistemology. Although various definitions of the term exist some solidarity can be found within the literature as to the distinction made between data, information and knowledge (Davenport & Prusak, 1998; Sanchez & Heene, 2004). The common agreement is that data is seen as being information that has not been interpreted or analyzed, whether quantitative or qualitative. Thus, information is interpreted data, or as Peter Drucker put it: "information is data endowed with relevance and purpose" (Drucker P. , 1988, p. 4). Taking this definition a step further, one could say that knowledge is accumulated information over time. According to the Cambridge Online Dictionary knowledge is an "understanding of or information about a subject, which a person gets by experience or study, and which is either in a person's mind or known by people generally; the state of knowing about or being familiar with something" (Cambridge Online Dictionary, 2013). Thus, knowledge is not limited to the information a person has learned from literature but also the know-how gained by experience or even the inexplicit instinct gained by practice. This type of knowledge, often referred to as tacit knowledge, is very important when it comes to innovation because often our ideas and inventions for improving the status quo come from our experience of using the current supply of products or services. This is also one of the reasons why

customers are a valuable source of knowledge for innovation; they possess the tacit knowledge gained by experiencing the current product and service supply, the current needs and desires for improvements. We will further discuss the typologies of knowledge and the process of knowledge creation in the next chapter.

Although the debate about knowledge has been around for a long time, it was only as recently as in the early 1990s academics as well as the business world began to recognize knowledge as a key organizational resource. In economics, the factors of production were traditionally considered to be land, labor and capital. In 1994 Peter Drucker claimed that these established factors of production were no longer key organizational resources determining success. He claimed that knowledge, or intellectual capital residing within firms, was the key driver of success: "Knowledge has become the key resource…" and as such it "is fundamentally different from the traditional key resources of the economist - land, labor, and even capital" (Drucker P. F., 1994, p. 76). In fact, he took the assortment further and pointed out the imperative of managing knowledge as a resource: "We need systematic work on the *quality of knowledge* and the *productivity of knowledge*" because "the performance capacity, if not the survival, of any organization in the knowledge society will come increasingly to depend on those two factors" (Drucker P. F., 1994, p. 82). The truth of these words written almost twenty years ago has now become evident and more scholars have come to the same conclusion. The recognition of the relevance of Knowledge Management can be seen when typing "Knowledge Management" into Google-Scholar's search engine with over three million articles and books suggested in the results. Many companies today have some kind of a Knowledge Management system in place acknowledging the importance of knowledge as a strategic resource. As competitive advantage has been recognized as resulting from companies providing differentiators such as 'quality', 'customer satisfaction' and 'innovations' knowledge and Knowledge Management have slowly been recognized as tangible, critical assets of an organization (Frappaolo, 2002). As stated earlier, companies begun to realize that their largest asset is the knowledge they have access to; or as Rahimli (2012) puts it: "to have a sustainable competitive advantage, an organization should realize how to create, distribute and utilize knowledge through an organization and how attach it to organizational process." In other words, as knowledge has become recognized as being such a valuable asset to firms, the urgency of managing it efficiently and effectively has been recognized. Knowledge Management has accordingly received

increasing attention in the last decade and has become an established academic discipline. Knowledge Management refers to "a broad collection of organizational practices and approaches related to generating, capturing, disseminating know-how and other content relevant to the organization's business" (American Productivity & Quality Center, 2002).

The drivers behind the importance of Knowledge Management in today's economy are various. The rapid advancement of computer and communication technology as well as increasing globalization over the last two decades are the most obvious, and these drivers have changed the business context for companies operating in today's economy. In order for businesses to survive and stay competitive in this turbulent, ever-changing business environment they need to continuously improve, develop and implement innovations. This can for instance be witnessed in the increase of filed patents at the United States Patent and Trademark office which went from 186,507 patents filed in 1992 to 576,763 in 2012, an increase of 209% in twenty years (U.S. Patent and Trademark Office, 2013). Though innovation can mean a radical change - a revolutionary new product or transformation of organizational processes, by going beyond the boundaries of existing knowledge and developing new knowledge and insights - it can also take a different form. Innovation can namely be incremental, involving modification and enhancement of existing products or processes. Innovations usually emerge from "…the ability to search for and identify relevant external knowledge, apply existing knowledge to new contexts, understand and absorb unfamiliar external knowledge, and blend and integrate different bodies of knowledge together" (Hislop, 2009, p. 113). Also, innovations appear to be becoming more complex in nature and companies increasingly recognize that internal knowledge does not always suffice for their innovation activities and thus search for knowledge externally. Hence, the importance of customer knowledge is clear; external knowledge from customers integrated with existing organizational knowledge can be valuable in the innovation process. We will further reflect on customer knowledge later in the paper.

3.1.1. Knowledge Creation

Although knowledge creation is not the only relevant attribute in the innovation process, it is clear that it is an important one. Nonaka's approach to knowledge creation has become an iconic theory, possibly the most influential and widely referenced theory in the knowledge management literature (Gourlay,

2003; Hislop, 2013). The theory developed by Nonaka individually and in cooperation with his colleagues (Nonaka I. , 1994; Nonaka & Takeuchi, 1995; Von Krough, Ichijo, & Nonaka, 2000; Nonaka, Toyama, & Byosiere, 2001; Nonaka, von Krogh, & Voelpel, 2006; Nonaka & Toyama, 2003) (Nonaka & Konno, 1998) centers upon the continuous interaction between tacit and explicit knowledge and asserts that this interaction is the basis for knowledge creation. In order to understand the theory we must first define the difference between tacit an explicit knowledge. According to Nonaka and his colleagues "knowledge that can be uttered, formulated in sentences, captured in drawings and writing, is explicit" while tacit knowledge is "tied to the senses, movement skills, physical experiences, intuition, or implicit rules of thumb" (Nonaka, von Krogh, & Voelpel, 2006, p. 1182). The process of knowledge creation is described by Nonaka's SECI model (Nonaka, 1994), see figure 4. The model portraits the four stages:
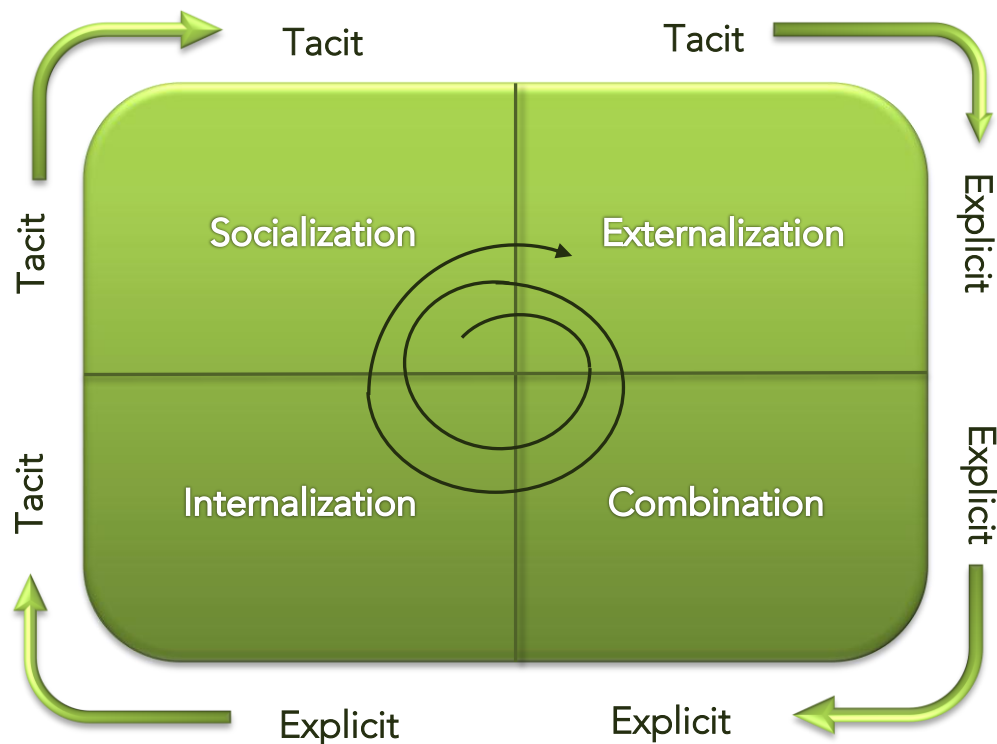
Figure 4: The SECI Model (Nonaka, 1994)

Firstly, the mode of knowledge creation he calls *socialization*, is a process of sharing tacit knowledge between individuals. This happens through interaction or observation and can be done without using language. Examples of this process could be when a child learns to put its clothes on by observing how its parents perform the task, a spectator learning to talk in front of a crowd by watching a speaker on stage, or in an organizational setting when a new employee observes his/her colleagues perform a task. Nonaka's model assumes that socialization happens via face-to-face social interactions and does not reflect on tacit knowledge gathered from modern information systems, such as tacit knowledge gained from reading "between the lines" of a post on a social media site. Through virtual settings we suggest that knowledge can be received from customers about their values and preferences by analyzing what is *not* written, hence being tacit knowledge sharing. We propose that this type of tacit knowledge sharing has become relevant in today's connected business world. Socialization in modern society often takes place in a virtual setting and as such, the sharing of tacit knowledge in a virtual setting must be pertinent.

Secondly, *combination* is the mode of knowledge creation that depicts the process of exchanging and combining different explicit knowledge bases. Nonaka assumes that this happens mainly through social processes such as meetings or telephone conversations but here again, modern technology must be acknowledged. The Internet, especially with the help of Web 2.0 technologies, has created many different platforms for the exchange of explicit knowledge between individuals (or individuals as employees representing organizations). The rearrangement and reconstruction, as well as sorting, adding and decontextualizing existing explicit knowledge can generate new knowledge. An example of this is communication between a customer and an employee on a company's Facebook page. The customer might write suggestions on how the company's service could be improved or share information on how he uses the company's product. This knowledge together with the employee's existing knowledge (or explicit knowledge in the form collecting data available to him) might spark an idea for how to better cater to customers' needs or even an idea for a new value proposition.

The third mode of Nonaka's knowledge creation model is *internalization*, which aims to embody explicit knowledge concepts into tacit knowledge. This mode is consistent with traditional learning. As individuals identify and familiarize with relevant explicit knowledge it becomes embedded into their mental mode. Subsequently, the new knowledge is used by the individuals who by doing so share it,

extend it, deepen it and reassemble it into their prevalent tacit knowledge bases. An example of this type of knowledge creation process is learning-by-doing and practical training. Another example in association to customer knowledge is when a company's employees monitor explicit knowledge their customers provide and this knowledge becomes embedded in the employee's tacit knowledge base.

Nonaka's model lastly portrays *externalization*, as a process of turning tacit knowledge into explicit concepts. Externalization can take place through use of techniques such as analogies or metaphors that can help express an individual's tacit knowledge (e.g. his feelings or beliefs) in explicit terms. Another way is to elicit and translate tacit knowledge of others into explicit form. An example of this is when in a group of people, an individual gets feedback and simultaneous exchanges of ideas, which can help the individual better articulate his thinking. Again, virtual settings seem to be able to provide the necessary environment for this knowledge creation process to occur as exchanges in a virtual setting provide feedback and simultaneous online communication.

Nonaka claims that a continuous dialogue and interaction between the four stages or modes, is what drives new ideas and concepts, i.e. that while each stage, or mode, can create knowledge independently, the more the knowledge spirals through the different modes the more successful the knowledge creation process will be. Not in a circle, but in a spiral, as the knowledge gets deeper as one continuously learns something new for each stage he passes. He reasons that while the knowledge is formed in the minds of individuals, interaction occurs between individuals and as such communities of practice develop new knowledge. Moreover, he points out that these communities of practice can originate from outside organizational boundaries (Nonaka, 1994). As such, customer knowledge can be argued to be of relevance to the knowledge creation process.

The attention the SECI model has gained is quite comprehensible. The model recognizes the dynamic nature of knowledge and how combining different types of knowledge can result in the creation of new knowledge, underlining the importance of sharing knowledge between individuals. Although the model was developed over twenty years ago, it is well applicable today in the markedly changed business environment as it for example seems to agree with using viral communications and computer technology for sharing knowledge. The model does not indicate that one mode is more critical than another, but in regards to innovation we believe that the socialization and externalization modes are the

essential modes to consider. Using tacit customer knowledge, e.g. recognizing hidden customer needs, seems to be a good source of inspiration for innovations. We will further discuss the link between knowledge and innovation in chapter 3.4.5.

3.1.2. Customer Knowledge

In today's market-driven economy managing the knowledge residing within firms, however important, might not be sufficient for sustainable competitive advantage. Seizing customer knowledge has become crucial for success. Different interpretations can be found in the literature for the concept of Customer Knowledge Management. Gibbert, Leopold and Probst (2002) refer to the concept as knowledge residing in the customer and assert that "corporations are beginning to realize the proverbial 'if we only knew what we know' also includes 'if we only knew what our customers know'" (ibid p.459) and thereby exclude knowledge about the customer from the definition. Other writers have argued that managing customer knowledge refers to managing knowledge about customers, e.g. their needs, in order to develop strategies for new innovative product development to win customers' satisfaction (Su, Chen, & Sha, 2007); (Davenport, Harris, & Kohli, 2001). We acknowledge both definitions and will refer to customer knowledge as on the one hand knowledge about the customer, for the purpose of understanding the customer, their needs, desires, emotions and feelings, and on the other hand knowledge from the customer, i.e. knowledge or intelligence the customers possess, particularly their capabilities for co-creating with the company. We thus reason that Customer Knowledge Management deals with capturing and organizing this knowledge so that it can create value for the company. In addition to strengthening relationships with the customer, Customer Knowledge Management can give insight into how the company can improve its goods or services or act as a source of inspiration for new products or services. In this paper we focus on three specific ways, or three customer communication platforms - neuromarketing, social media and netnography. We propose that all these platforms give companies a chance of either gathering knowledge about or knowledge from customers (or both), which can, with proper management, be used in the innovation process.

The literature maintains that companies need to be able to sort out the appropriate customers to pay attention to. "In dealing with new product ideation companies can leverage differences among consumers in their *expertise* regarding a specific product, in the *interest* they manifest in contributing to

new product ideation, and in their *ability to anticipate* market evolutionary trends" (Busacca, Cillo, & Mazursky, 2008, p. 8). Busacca and colleagues propose that for product ideation, companies take advantage of knowledge from lead users, trendsetters and creative consumers. Lead users, having mostly been noticeable in a business-to-business setting, have become increasingly relevant in business-to-consumer context as co-creation between companies and their customers is progressively used for innovation. Lead users are those whose current needs will become common needs in the future, and they participate in the product ideation because they can significantly benefit from the solution. Trendsetters are traditionally found in a business-to-consumer context, they anticipate new trends but unlike lead users do not participate directly in the product ideation process, but rather serve as an inspiration for the innovation process. As such they do not (unlike lead users) benefit directly from the new product. Creative users on the other hand, are customers who adapt, modify or transform a product or service for their own use, and as such they can inspire companies with new value propositions (Busacca, Cillo, & Mazursky, 2008). Although the knowledge companies can attain from these three types of customers is important we argue that knowing the typical end-user of the product or service is also very important. With the help of modern communication and information technology, companies have better access to knowledge about and from the mass. Through netnography, companies can not only identify and locate their lead-users, but also gather information on what the majority of consumers prefer or dislike. The importance of this ability can be supported by a study presented in the McKinsey Quarterly that concludes that high-performing companies (according to given performance measures such as brand portfolio sales growth) use unconventional ways of capturing knowledge opposed to other companies (Crawford, Mulder, & Gordon, 2007). Busacca and colleagues also support this as they point out that the opportunity of using non-traditional market research can enhance potential contribution of unconscious customer knowledge for product ideation (2008).

3.2. Sources of Customer Knowledge: the Three Platforms

As noted earlier, the three customer communication platforms this paper focuses on are neuromarketing, social media and netnography. These are fairly new sources, or venues, that can offer companies access to customer knowledge. These have evolved due to advances in technology and the

increasing popularity of the Internet. In the following chapters we will discuss each of these platforms, and the process of selecting the relevant knowledge from the platforms. We also discuss what kind of knowledge can be gained from the three platforms, i.e. which categories of knowledge the platforms provide.

3.2.1. Neuromarketing

Neuromarketing is a relatively new field of marketing research that uses neuroscientific methods to study the affective response to marketing stimuli. With the help of the available technology, such as functional magnetic resonance imaging (fMRI), positron emission tomography (PET), or electroencephalography (EEG), neuromarketers can make assumptions and draw conclusions about consumers' levels of attention, arousal responses, feelings and emotions towards the stimuli. "Neuromarketing as a field of study can simply be defined as the application of neuroscientific methods to analyze and understand human behavior in relation to markets and marketing exchanges" (Lee, Broderick, & Chamberlain, 2007, p. 200). By using neuroscientific methods companies do not have to rely completely on self-assessment measures and the ability, willingness and reliability of the respondents in marketing research, but can instead compare and combine these conventional measures with the physiological responses of consumers.

Neuromarketing is performed by connecting a consumer to, for example, an EEG mechanism and while showing the consumer the stimulus in question, the neuromarketer measures the brain activity of the subject. In neuroscience different parts of the brain have been identified as being affected by emotions and feelings. These are primarily the prefrontal cortex regions (PFC) and the amygdala (Dolcos, LaBar, & Cabeza, 2004; Groeppel-Klein, 2005). The Insula has also been linked to emotions, in particular the basic emotions (happiness, sadness, surprise, fear, disgust, etc.), and the hippocampus has been identified as a part of the brain that is linked with emotional memory (Kirby, et al., 2012). As such, special attention is given to the change in activity in these parts of the brain when the stimulus is presented, and conclusions about the subject's feelings and emotions towards the stimuli drawn. The neuromarketer thus analyzes the processes that take place in the brain when a consumer observes the stimulus, examining the neural responses using variables of cognitive processing or attention engagement, emotional attachment, hemispheric symmetry, memory activation, effectiveness of colors,

etc. (Minicode, 2013). The stimulus shown to the consumer could be of various types. Depending on what is being researched and for what purpose, the stimulus could be an advertisement, an artifact, the product itself, or the consumer could be asked to close her eyes and listen to a story.

The emotions and feelings companies' offerings can have on potential customers are important for several reasons. According to the somatic marker hypothesis "decision-making is a process that is influenced by marker-signals that arise in bio-regulatory processes, including those that express themselves in emotions and feelings. This influence can occur at multiple levels of operation, some of which occur consciously, and some of which occur non-consciously." (Bechara & Damasio, 2005, p. 336). Accordingly, consumers decide whether they like a product or service and make purchasing decisions not only on a conscious level but their subconscious also plays a part therein. It is thus important for companies to be able to identify and measure the attention, engagement and emotions a product or service (or attributes such as the product's packaging or appearance) has on consumers. The ability to do so accurately could provide companies with more efficient and accurate measures for designing their products and services to suit consumers' preferences. Neuromarketing as a field of study can thus provide new knowledge about consumers, knowledge about which particular feature of a product or service interests consumers, engages consumers or sparks positive feelings among consumers. This knowledge can be quite valuable in the innovation process, in particular when it comes to the product design, e.g. designing the right combination of sound, smell, feel (touch), etc. of a product. We have already established the link between customer knowledge and innovation earlier in the paper, and by using neuromarketing companies are provided access to more variety of knowledge about their customers. These methods should not replace traditional methods of consumer research for innovation purposes; they can simply serve as an addition to the assortment of knowledge pools.

A study by McClure and colleagues in 2004 showed that areas of the brain that have been connected with emotions were more active among consumers when told they were drinking Coke than when they were told they were drinking Pepsi. Furthermore, consumers preferred Coke over Pepsi while not recognizing a difference between the products when blind tested. This study highlights the complexity of choice-making as well as emphasizing the value of emotional, situational and informational inputs have on customer preferences (McClure, Li, Tomlin, Cypert, Montague, & Montague, 2004), (Lee, Broderick, & Chamberlain, 2007). This is especially relevant for product innovations as the small

differences in the product's design and packaging, its logo or marketing messages, can, with the help of neuromarketing, be perfected. As shown with the Coke and Pepsi study, the emotional effect a product can have on consumers is sometimes only affected by the difference of appearance rather than the essence of the product itself. These small differences can in some cases explain the success or failure of new products or incremental innovations. Knowledge gained from neuromarketing can thus be helpful in the innovation process, in particular when used in combination with other relevant knowledge for the innovation's design.

3.2.2. Social Media

With the widespread use of the Internet, social media applications have become increasingly popular among individuals and companies. According to Kaplan & Haenlein (2010) social media is a group of Internet based applications that build on the ideological and technological foundations of Web 2.0 and allows people to create, share and exchange information and ideas in virtual communities and networks. In addition, it allows individuals and communities to co-create, discuss and modify user-generated content, a new communication perspective if you will (Kietzmann, Hermkens, McCarthy, & Silvestre, 2011). High speed Internet connections and advanced mobiles are the main reasons for increased participation in social media. It is an interactive media that exploits the interplay of users, wherein every user has an input (Eyrich, Padman, & Sweetser, 2008). The interplay between users offers more interactions and information than before and enhances knowledge transfer among users. Social media is a popular technique for marketers to approach consumers and create awareness. However, the usage of customer knowledge from social media for innovation purposes has been less notable in the literature, although some interesting studies can be found. Füller and colleagues for example, presented a study for integrating members of virtual communities into new product development for the automobile company Audi (Füller, Bartl, Ernst, & Mühlbacher, 2006). The result from their study showed that community members were motivated and willing to participate in the innovation process and they provided a number of ideas that were new to Audi's R&D and marketing department. A number of companies are already using social media as a source of customer knowledge for their innovation process. The children clothing brand *Name it* for example, uses its Facebook page to ask its followers which colors, cut, design or pattern they would like to see a certain item of clothing produced in and asks directly for ideas of how to improve their service from customers. One piece of

feedback has led *Name it* to collect the brand's used clothing for charity - an innovative way to increase sustainability of their clothing as well as increasing brand value (Name it, 2013).

Currently there are a number of social media applications to be found on the Internet that vary in functionality and scope. Some applications are for the masses e.g. Facebook and Pinterest, where everyone can easily join and participate in sharing, communicating and exploring. Other applications are more focused on a particular purpose e.g. LinkedIn. Media sharing sites, e.g. YouTube and Flickr, concentrate on shared videos and photos. Blogs are also becoming more acknowledged because they are easy to create and maintain. The users of social media stretch from everyday people to professionals or corporations (Kietzmann, Hermkens, McCarthy, & Silvestre, 2011). When looking at the statistics from 2012, the numbers are overwhelming. Monthly active users on Facebook are nearly 850 million, 100 billion connections exist (Bullas, 2012), and 80% of users chose to connect with brands via Facebook. In order to take advantage of this ratio, companies need to monitor comments and sharing from fellow users and contribute their own (Jorgensen, 2012).

Haenlein & Kaplan (2010) offer a categorization of social media by certain attributes from media research: social presence and media richness on the one hand, and self-presentation and self-disclosure on the other. *Social presence* is defined as the acoustic, visual and physical contact that can be achieved between two communication partners. It is determined by the intimacy and immediacy of the medium, e.g. there is a lower social presence for telephone conversation than face-to-face communication, and email than live chat. The higher the social presence, the larger the influence it has on the behavior of both communication partners. The social presence for social media depends on the application; the more active the users are and the more sharing of visual and acoustic materials it allows, the higher the social presence of the medium. *Media richness* refers to the effectiveness of media, and how it resolves vagueness and decreases uncertainty. Social media can offer some degree of intimacy and is thus classified as having a low to medium degree of media richness, depending on its level of interaction between partners (Kaplan & Haenlein, 2010). The concept of *self-presentation* concerns the degree to which people have the opportunity of controlling the impressions other people form of them, for instance through blogs. Users can for example, consciously or unconsciously, reveal only personal information that is consistent with their Internet persona. Closely related is the realm of *self-disclosure*. Self-disclosure relates to how intimate the development of close relationships is, that is, how much the

social media application allows or provides for the opportunity of revealing personal information. As an example, Facebook offers high self-presentation and high self-disclosure in comparison to Wikipedia. The balance between the two categories (social presence/media richness and self-presentation/self-disclosure) varies between social media applications (Kaplan & Haenlein, 2010). In this paper, the main focus is on social media applications that are categorized in the high self-presentation and self-disclosure group, and low to medium social presence and media richness group, e.g. Facebook, Twitter, Blogs, Pinterest, etc.; those that provide text-based communication and enable sharing of different kinds of media.

In customer driven innovation practices the customer intelligence, equity and customer relationship management are priorities for most companies that want to gain and sustain competitive advantage. For years, the innovation process has remained within the organization, but by adopting a collaborative approach towards innovation processes an organization can allow the customer to be involved directly through Information and Communication Technologies and Web 2.0 applications, i.e. social media. Through the virtual environment created, the organization can for example tap into the social dimensions of customer knowledge e.g. knowledge shared among people with shared interests (Prandelli & Verona, 2008).

3.2.3. Netnography

Every day there are endless activities occurring among Internet users; people are checking their email accounts, searching for information regarding their hobbies, the weather, future purchases, commenting in forums, making travel arrangements, and so on. The online world is vast. Consumers are sharing all sorts of emotions, feelings, opinions, promotions and an abundance of other information with each other, about an innumerable range of products, brands and retailers. According to Kozinets (2010), the online environment provides a pretty much unlimited access to customer-to-customer communications. By observing consumers in their natural online habitat, organizations can add to their pool of knowledge information about their customers and information from customers; customer knowledge. The information gathered from these observations can be relevant and detailed, done in a normal setting for the consumer, not evoked by anyone and attained in an inconspicuous way. The data gathered is raw, powerful, and authentic, and often it is incredibly creative. Kozinets (1998) has

introduced a qualitative research method, netnography, which is aimed at researching these online cultures. Online observations can be helpful for companies to record what customers are talking about and use the information gathered for their own product and service developments and enhancements, as well as serving as inspiration for new innovations. The method, netnography, offers researchers and organizations the chance to observe Internet activities of various people and record their insights and needs. The word netnography is coined from the qualitative research method eth*nography* and the Inter*net* or technology *net*working. Ethnography is concerned with a description of a culture or group and the members' experiences and interpretations; it researches a way of life of a group or community. It relies on extended periods of fieldwork (Daymon & Holloway, 2002). Often researchers live and work among the target observations. The two methods (ethnography and netnography) are similar in some aspects. The setting of the research, in both cases, is natural in the sense that the researcher seeks out a culture and approaches it where the culture exists, lives and breathes. The methods are descriptive and are adaptable to any setting. Netnography adapts ethnographic research techniques to study online communities, but still differs from traditional ethnography (Kozinets, 2002; Sandlin, 2007). The main difference is that netnography does not require the researcher to participate in the culture, nor that the researcher is located in the same physical location as the subject of study. It can be carried out using only observation over the internet, or downloads (Kozinets, 2002), i.e. netnography does not require extended periods of fieldwork because it is all through ICT systems. Another difference is that netnography was developed as a marketing tool, as opposed to traditional ethnography which usually assists in gaining insights about people, rather than to understand the norms and practices in the community as such (Kozinets, 2002; Sandlin, 2007). Since netnography has been utilized as a marketing tool with gaining insights and preferences from customers, we propose that the knowledge obtained from customers could also be used for innovation purposes as we have already argued that customer knowledge enables innovation.

The literature suggests that the next big wave in netnography will be about consumer insights (Kozinets, 2010; Verhaeghe, 2012) and continually finding new ways of turning information into insights. By gaining knowledge from the customer through their Internet activities, companies can establish a pool of resourceful knowledge for future and current actions. Netnography focuses on cultural insights like ethnography does, and pays very close attention to context in all variations

(Kozinets, 2010). With this in mind, innovative efforts for organizations could be derived from netnography. A recent study by Mahr & Lievens (2012) shows that the challenges of developing new products and services to meet customer needs in a volatile environment, requires taking advantage of technical opportunities available to organizations. Consequently, by accessing virtual innovation communities in dynamic markets, as well as identifying the triggers for creation of valuable knowledge, is important for organizations.

This idea of observing the customers' online activities is applicable to both online businesses as well as more traditional businesses. Chua & Banerjee (2013) illustrate with their example of the traditional coffee house Starbucks, that observing your customers online can be a game-changer in supporting customer knowledge management efforts as a source of ideas for innovation. Three major findings can be drawn from their example. Firstly, Starbucks exploits a wide range of Internet applications for their customer knowledge management which serves as a base for marketing and attainment for customer knowledge, which keeps them updated on latest products, expectations, behavior and preferences. Furthermore it gives Starbucks an idea on what is being discussed in regards to their products and services. All applications correspond and complement each other to reinforce their overall impact. The second finding relates to the customers as it makes them active contributors of innovation instead of being passive paying customers. Hence it increases loyalty and inspires the customers themselves to be a part of the development process. Finally, in order to get the customer to voluntary participate and share their thoughts and feelings, Starbucks has baristas who promptly respond to customers' requests and ideas, thereby making the customers feel that they're being valued for their input, which further motivates them to continue their participation. At the same time, Starbucks makes an effort to control the knowledge flow so it does not seem to be a nuisance to enter their online platforms.

Whether the organization is in retail, e.g. grocery or hardware stores, or progressive businesses, netnography can be helpful for innovation. The sophistication and fast changing taste and preferences of customers has led to a paradigm shift in Knowledge Management in the direction of a dynamic customer-centric approach. The paradigm shift has resulted in a more complex customer relationship management where the customer is growing more demanding towards customized products and services. It is important to make use of the knowledge gained, turn complaints into improvements, and so on. The Internet has transformed online users from being passive readers into active content

publishers and companies have the opportunity to take advantage of this shift in dynamics (Chua & Banerjee, 2013).

3.2.4. Categories of Customer Knowledge

When analyzing the customer knowledge attained through the three communication platforms it becomes clear that there are different categories of knowledge to be gained through each platform. There are two classifications of knowledge we find particularly relevant for the innovation process; firstly, the distinction between tacit and explicit knowledge, and secondly a richer taxonomy of know-what, know-how, know-why and know-who. In the knowledge management chapter earlier in the paper, we introduced the difference between tacit and explicit knowledge. We will further reflect on that categorization here and attempt to place it into the context of customer knowledge that can be gained through each platform. We will then introduce the second classification and reflect on which category of knowledge is to be gained through each platform.

3.2.4.1. Tacit and Explicit Knowledge

The categorization between *tacit* or *explicit* knowledge, was initially introduced by Polanyi (1966) but later, as discussed in chapter 3.1, it was developed by Nonaka and colleagues (1994; 1998; 2003). They emphasized the continuous interaction between tacit and explicit knowledge, which they argued is the basis for knowledge creation. When knowledge is acquired through the customer communication platforms it is then shared and applied, and consequently converted from one type of knowledge to another, enabling new knowledge to be created.

When companies use neuromarketing techniques they tap into the unconscious knowledge residing within its customers. This knowledge is tacit as in some cases the customers have not even realized it on a conscious level. An example of this could be when a neuromarketer shows a consumer a certain stimulus, which produces an increase in the consumer's levels of dopamine. This could be measured with help of neuromarketing technology, even if the consumer himself could not describe or pinpoint the feelings he experiences. This tacit knowledge is then analyzed and codified by the neuromarketer and thereby turned into explicit knowledge - the process termed *externalization*. As the neuromarketer (or another employee) combines this newly acquired explicit knowledge with other explicit knowledge

residing within the firm, e.g. market research, new knowledge is created; the process of *combination*. As the newly created explicit knowledge is studied, learned and practiced by the employee he or she develops a feeling about the customer's preferences (the previously gained knowledge) - an instinct learned from making use of the knowledge. This is the process of *internalization*. As the employee associates with other employees his or her tacit knowledge influences and gets transferred to other members of the organization; the process of *socialization*. The knowledge then circulates through these four stages as more people engage in the knowledge creation process and subsequently the knowledge becomes deeper and more developed.

The same process of knowledge creation takes place when companies acquire knowledge from social media as it does through netnography, although there are notable differences. The customer knowledge retrieved from social media takes various forms. Statements written by customers on social media pages, e.g. statements about their preferences, desires, their likings and dislikes are explicit knowledge about the customers. 'My Starbucks Idea' on Twitter is an example of how companies can gather ideas from its customers through social media. Starbucks has gathered over 80.000 ideas from its customers, many of which have turned into new or improved products or services (Starbucks, 2013). In some cases the customers share their expertise through social media, providing companies with knowledge from customers, adding to the company's knowledge base. In both of these cases the explicit knowledge is combined with the employees' explicit or tacit knowledge and therefore the spiral of knowledge creation begins with either *combination* or *internalization*. As the company, or more precisely an employee of the company, communicates with a customer on the social media platform he or she will gain tacit knowledge about the customer as the employee perhaps learns to "read" the customer from experience, also recognizing the things that are not said (or written) developing the ability to "read between the lines". The spiral of knowledge creation then starts with *socialization*. With netnography, the same applies as the employee will read web pages and analyze what is said and what is not (written or not written) developing knowledge about customers and perhaps gaining some customer expertise in the process. This knowledge creation process could then start with any one of the four stages. Interestingly, when an employee is analyzing what is not written, or learns to "read between the lines" of the things customers write online he or she could be turning tacit knowledge into tacit, i.e. a stage of socialization, although no direct interaction between the customer and the employee

occurs. If we go back to our example of the children's clothing company *Name it* from earlier in the paper, the company put forward an idea on their Facebook page to collect the brand's used clothing for charity. The company's employees could analyze the reactions and feedback the idea received on Facebook (and through netnography on other internet sites) and make assumptions from not only the written feedback but also what is not written. If the idea would get few "likes" on Facebook or little expressed interest from customers, perhaps the tacit knowledge of customers, e.g. their negative feelings towards the idea, would turn into the employees' tacit knowledge – a feeling of predictable failure of the idea. The employees turn this tacit knowledge into explicit by e.g. further communicating it to their superiors, and so the knowledge creation cycle spirals. Therefore, we challenge the notion that turning tacit knowledge into tacit must happen through direct face-to-face socialization or communication between individuals.

3.2.4.2. Know-what, know-how, know-why and know-who

The other categorization is a richer taxonomy, supplementary to the distinction between explicit and tacit knowledge, set forth by Johnson, Lorenz & Lundvall (2002). They provide their own assessment on why the distinction between explicit and tacit knowledge is important in relation to knowledge management practices and economic theory. Firstly, they contest to the notion that all knowledge can be and should be codified or made explicit. They provide three reasons for this statement: firstly, if all knowledge could be codified the entire education system could be transformed into an e-learning system; secondly, tacit knowledge on an organizational level is highly valued as portrayed by the demand for hiring experts and acquisitions of firms with skilled employees; and thirdly, third world countries having access to the same information online as the developed world struggles to increase economic development (Johnson, Lorenz, & Lundvall, 2002). They further argue that the basic distinction between tacit and explicit knowledge is insufficient to answer questions on innovation strategy and knowledge management. They claim that a more detailed taxonomy is needed to reflect the complexities involved in storing and sharing knowledge. While we believe it to be true to a point that not all knowledge can be, needs to be or should be codified; it has advantages in numerous situations. Although codification of knowledge quickly becomes outdated in the speed of today's economy, some knowledge changes slower than others (e.g. operating manuals for machinery tend to change slower than customer preferences as styles go out of fashion quicker than companies renew

their machinery). Nevertheless, codifying information gained through the three platforms this paper focuses on should not be as time consuming as for example writing an operating manual and therefore the spiraling process of the SECI model should happen rapidly and continuously. Johnson and colleagues propose dividing knowledge into four categories which are defined on an individual level, but the same logic can be applicable on an organizational level. They term the four types of individual knowledge *know-what, know-why, know-how and know-who* which on an organizational level would correspond to *shared information databases, shared models of interpretation, shared routines* and *shared networks* (Johnson, Lorenz, & Lundvall, 2002). We will discuss this categorization on the individual level in the following paragraphs, but the discussion can also be transferred to the organizational level logic.

The first type of knowledge, *know-what*, refers to factual knowledge, i.e. knowledge that can be codified and stored in databases. In relation to customer knowledge this would be facts about the customer as well as facts the customers knows. Another word for this kind of knowledge is basically information. Customer knowledge that companies gather from neuromarketing, social media and netnography can be *know-what* knowledge; knowledge such as what the customers like, e.g. which colors, cut, design or pattern. Due to the overwhelming and constantly increasing amount of *know-what* knowledge to be found on the Internet, the challenge of making use of this type of knowledge through netnography in particular, will be sorting and classifying which knowledge is relevant for the company.

The second type of knowledge in Johnson and colleagues' categorization is *know-why*. It refers to "knowledge about principles and laws of motion in nature, in the human mind and in society" (Johnson, Lorenz, & Lundvall, 2002, p. 250). *Know-why* knowledge can entail why the customer has certain preferences over others or why customers choose one promotion over another. This type of knowledge is sometimes tough to codify and can be tacit in nature, e.g. a feeling or instinct a customer has that perhaps influences his choice of purchase, sometimes on an unconscious level. Usually though, this knowledge can be coded but according to Johnson and colleagues never entirely, as all skills and knowledge are different mixtures of tacit and explicit knowledge.

The third type of knowledge, *know-how*, refers the capability to do something. It can relate to all activities where individuals use their *know-how*; skills, personal knowledge and intuition. This type of

knowledge has typically been kept within the boundaries of the organizations but as the complexity of the knowledge base has been increasing organizations have begun to seek inter-organizational know-how knowledge; co-operation between organizations has increased and so has co-operation and co-creation with customers (Lundvall, 2006). The importance of networking has become increasingly relevant when the need to share and combine know-how has become essential. In an innovational context combining the know-how of customers and others outside the company with the knowledge residing within the company can increase innovation success (Su, Chen, & Sha, 2007).

Continuing with the notion of co-creation of innovations, *know-who* knowledge is the fourth and final category set forth by Johnson and colleagues. In the networked economy of today it becomes especially relevant as it involves information about who knows what and who knows what to do. As knowledge becomes more specialized and innovations often require different disciplines of knowledge in addition to the speed of change, having access to different sources of knowledge is essential. *Know-who* requires the social ability to communicate with different individuals and knowing which individuals or experts to communicate with. Organizations also benefit from this knowledge as it is important for them to know who their customers are and who the trendsetters and lead users are. Because it is highly context related; depending on what is being created, it is rather difficult to codify (Johnson, Lorenz, & Lundvall, 2002).

3.2.4.3. Categories of Knowledge from Neuromarketing

The neuromarketing platform provides companies with knowledge that can be used to make assumptions about consumers' feelings, which are sometimes unconscious and tacit to the consumers themselves. The type of knowledge gained from customers through neuromarketing is mostly tacit, yet we would categorize it as know-what knowledge. As discussed earlier, know-what knowledge is usually explicit, but in this case the tacit knowledge is converted into explicit as it is interpreted by the neuromarketer. This knowledge is factual about what the customer prefers and what reactions certain stimuli induce in consumers. These facts are gathered through the platform and become explicit knowledge to the firm. This knowledge can be used for various activities in the innovation process, especially in connection with incremental product innovation, packaging innovation, and marketing or communication innovations. Of course, for the knowledge gained by the neuromarketing platform to

have value in the innovation process it must be relevant for the product in question as well as reflect the target consumer group. We will reflect on the processes of selecting relevant knowledge further in the paper (chapter 3.2.5.).

3.2.4.4. Categories of Knowledge from Social Media

Social Media is a highly interactive platform for companies to communicate with customers on a daily basis. Knowledge gathered from customers through social media is mostly *explicit*, although we propose that companies can also gain some tacit knowledge about their consumers through social media. The social media platform can provide the whole taxonomy of *know-what, know-why, know-how and know-who* knowledge.

Explicit knowledge extracted from social media applications is easily codified as they are in the written form of questions, answers, comments, anecdotes, etc. By viewing the stories behind each entry or update, companies can further generate *tacit* knowledge about the users of the social media platforms for use in their innovation efforts. Not only can companies gain insight about their customers from what they write on social media, but this insight can also be gained by analyzing what customers do not write about. What customers do not respond to and what they do not "like" can give companies tacit knowledge about customer preferences; their likes and dislikes. An example would be a company that posts a new idea about product delivery on its Facebook page, either the customers' comments are mainly positive towards the novelty, mainly negative, or perhaps the Facebook post receives no comments at all. In that case, the company might interpret the "silence" from customers as if they are neutral towards the novelty. This knowledge would be tacit knowledge acquired by the firm from social media activities. This knowledge can be interpreted by the company's employees and made explicit, and could be of use in the company's innovation activities.

The categorization presented by Johnson et al. (2002) explains in more detail what kind of knowledge social media applications yield. Social media offers facts about the customer and reveals what the customer knows explicitly (*know-what*). By looking at the customer's profile, e.g. his or her Facebook page, or simply by asking why his or her preferences are those that they are, regarding a certain product or service, companies can be provided with *know-why* knowledge. Every element of knowledge about customers can be relevant for innovation. Understanding why customers prefer this over that can

provide companies with insight into future customer needs and desires. Companies can monitor their Facebook pages and other online social media networks that offer social presence to explore who their customers are, who prefers what as well as identifying who their lead users or trendsetters are, accordingly gaining *know-who* knowledge. *Know-how* knowledge can also be attained through social media as companies can reach out to their customers through this platform and ask customers for solutions that can be of use in their innovation processes.

3.2.4.5. Categories of Knowledge from Netnography

Netnography requires analysts (employees of the company in question, or a consultancy company analyzing on their behalf) to understand, analyze and articulate what the customer is implying with his or her written words. In addition, it requires the analyst to have the ability to read between the lines thus comprehend the tacit knowledge shared by the customer (as described in the example of the tacit knowledge from social media above). Interpretation is important in observation settings and demands experience and knowledge of what to search for and which online media to monitor e.g. personal profiles, blogs, communities, etc. Customer knowledge that can be gathered from the netnography platform is similar to knowledge from social media applications, discussed in the last chapter. It provides the same types or classification of customer knowledge, but netnography could perhaps additionally provide companies with a more diverse scope of knowledge as it can be gathered from different types of Internet sites. It thus requires extensive analytical expertise to interpret not only the explicit statements written by consumers online, but also the tacit knowledge to be gathered and made sense of, as well as determining which individuals to pay attention to. By experience and careful research, the analyst will develop his or her own tacit knowledge on which Internet personas or communities to observe for ideas, which are most active and inspirational, which are influential, and so on. With the abundance of Internet sites offering information from and about customers, the biggest challenge thus becomes sorting out the relevant and valuable information; i.e. sorting the sheep from the goats. We will reflect on this challenge in the next chapter; the process of selecting the relevant knowledge.

3.2.5. Processes for Customer Knowledge Selection

As we have established that customer knowledge can be gained through the three customer communication platforms, the challenge becomes identifying the relevant knowledge, i.e. the knowledge that is relevant for a company in its innovation activities. The process of selection is quite different between the platforms, though the difference mainly lies between neuromarketing on the one hand, and social media and netnography on the other.

When selecting knowledge from neuromarketing studies the customers chosen for the study must represent the target market for the innovation in question. An obvious example would be a company developing products exclusively for women, such as tampons. The company uses neuromarketing to gain insights about which features of the current products available promote negative emotions for the customer in order to identify the opportunity of improvement (incremental innovation). Using men as subjects of this study would be quite useless as they do not represent the target market and might exhibit completely different responses than women.

Another important factor when selecting knowledge from neuromarketing studies is the capabilities of the analyst. For example, reading the responses of a human brain or the amount of sweating requires special skills. The skills consist not only of academic education in the field but also the ability to interpret the results accurately, which grows with the analyst's practical experience. The notion of reverse inference also becomes relevant, which is something analysts must try to prevent. Reverse inference is a term used for when analysts draw conclusions from two studies and combine the results to make a joint conclusion. An example of this would be a when a customer shows increased activity in a particular area of the brain when drinking Coke. In another study this area of the brain was active when the customer was happy. A reverse inference would be drawing the conclusion that Coke makes the customer happy (Poldrack, 2006).

When selecting the relevant knowledge from the social media and netnography platforms the process is different. With the abundance of knowledge to be found on the Internet the identification and selection of the relevant knowledge becomes the main challenge for companies. A report published by the Organization for Economic Co-operation and Development (OECD) on the knowledge-economy identified this challenge: "As access to information becomes easier and less expensive, the skills and

competencies relating to the selection and efficient use of information become more crucial" (OECD, 1996, p. 13). There are seventeen years since that report was written and the amount of information and the ease of access have multiplied since then, making the statement even more relevant today. The report also notes that "capabilities for selecting relevant and disregarding irrelevant information, recognizing patterns in information, interpreting and decoding information as well as learning new and forgetting old skills are in increasing demand" (OECD, 1996). When companies select through social media and netnography which knowledge is relevant for their innovation activities these capabilities become crucial, hence the tacit knowledge of the analyst becomes a major asset for this process. Identifying users that can be classified as lead users or trendsetters can be valuable as the issues they write about can provide insights different from the average user. There are also numerous tools available for analyzing data on the Internet, such as Google Analytics, Clara Insights, Inspectlet, etc. that can be useful for recognizing patterns in what customers are writing about, what they find interesting, also revealing different customer classifications, such as lead-users or trendsetters.

3.3. Innovation and Innovation Management

Innovation has always been an important factor in companies' success as first argued by Joseph Schumpeter in his Theory of Economic Development from 1911[1]. He claimed that innovation, which he defined as "the commercial or industrial application of something new – new products, processes or method of production; a new market or source of supply; a new form of commercial, business or financial organization" is the strategic stimulus to economic growth (Schumpeter, 1934, p. 19). Many scholars have since written and discussed the subject of innovation, e.g. (Burns & Stalker, 1961); (Quinn, 1985); (Tidd & Bessant, 2009) and although most agree on the importance of innovation there are diverse meanings about how to manage it in order to optimize its success. A general assumption that can be drawn from the literature is that the drive behind innovation success is the capability to see alternative paths, see different perspectives and spot opportunities, and thus take advantage of new knowledge. This knowledge can then be used for innovations of a product or service itself, changes in the processes of creation and delivery, alterations of its market position, or paradigm changes in

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[1] *Theorie der wirtschaftlichen Entwicklung published in 1911: translated in 1934 as The Theory of Economic Development: An inquiry into profits, capital, credit, interest and the business cycle.*

fundamental practices of a firm, as these are all included in the underlying definition of innovation (Tidd & Bessant, 2009).

Although Schumpeter's claim that innovation is the driver of economic development is over a hundred years old, it has never been as relevant as it is today. The proportion of economic value that can be attributed to innovative capacity of intellectual intangible assets compared to hard assets, as a component of corporations' market value, has increased exponentially for the last twenty years (Davenport, Leibold, & Voelpel, 2006). In other words, the foundation of a company's innovation capability, i.e. the skills, expertise and know-how of its employees, the infrastructure, processes, culture, relationships, etc., have become the major component of its market value. Davenport and colleagues claim that the drive to innovate is now, more than ever before, crucial for corporate success and have termed today's economy the 'innovation economy' as the accelerated knowledge sharing and turbulent corporate environment forces companies to constantly reinvent, adapt, innovate.

There are several drivers of the innovation economy. With the arrival of the Internet and mobile communications, networks linking knowledge between users have made knowledge sharing and knowledge creation more accessible. Value has become the product of intellectual capital, not physical assets, and as such, provide increasing instead of decreasing returns throughout their lifetime. Customers have come to play a pivotal role in companies' success as they have become knowledge-empowered and in some cases they drive innovations with co-creating value with companies (Davenport, Leibold, & Voelpel, 2006). This last driver, the customer empowerment, is particularly interesting for the topic of this paper. Customers in the innovation economy are demanding, resourceful and knowledgeable. As will be discussed later in the paper, in the chapter on innovation and knowledge (chapter 3.3.5.), tapping into the knowledge of a company's customers can give the company a clear advantage.

Richard Branson defined an innovative organization as one that lives and breathes outside the box. Furthermore, Branson suggests that an innovation is a mixture of good ideas, motivated employees and an instinctive understanding of your customers' wants and needs (Branson, 1998). Organizations need to obtain this unconscious, instinctive knowledge from customers in order to stay competitive and to be able to constantly renew themselves. Innovation requires knowledge, ingenuity and focus (Druker,

1985). Drucker further suggests that all entrepreneurs have one thing in common; a commitment to a systematic approach towards innovation. Though there could be a few moments of pure genius in managing innovation, most innovations stem from a purposeful search of innovation opportunities. This systematic approach towards innovation, termed innovation management, essentially the subject of managing processes in the development of innovations, has become vital for companies to seize the opportunities presented to them. We will further reflect on the innovation process in chapter 3.3.4. Innovation management requires a lot of work but can also produce the most extraordinary results.

3.3.1. The Value Contribution of an Innovation

Innovations are about functional or symbolic improvements. They are novelties, offerings or new ways of doing things that bring value to someone (or something). The essence of this value can be various, e.g. economic, social, environmental, etc. The value an innovation supplies is the reason customers choose one product over another. The value should satisfy a need or solve a problem for the customer. A product can have endless features but unless these features have value for someone that is willing to pay for them it is doomed to fail; there has to be a balance between the innovation's perceived value by customers and the innovation's fair price. When examining the concepts of *value* and *customer* further, and how they have changed in the management literature, it is evident that there has been a change in the managerial mindsets in the value creation process, i.e. in the established and imprinted assumptions, beliefs, means and characteristics of the manager or the management team, which will shape their choices and behavior. The shift has been from a conventional competitive-goods mindset to a collaborative value innovation mindset. The conventional mindset perceives customers as recipients of goods through group needs and the value is determined by the organization, thus embedded in the resources available. On the other hand, from a value innovation mindset customers are always co-producers of an offering, and recognized as individuals with custom needs. In addition, the value is retrieved from operant resources and determined by the customer (Davenport, Leibold, & Voelpel, 2006). The two above mentioned mindsets don't have to be mutually exclusive as a lot of organizations operate two or more business models, which may require both the traditional competitive-goods-mindset (for their ongoing business) and the collaborative-value-innovation mindset (for their innovation efforts).

This is in line with Vargo's and Lusch's (2004) interpretation of value, as they propose a shift from the goods-centered dominant logic to a service-centered dominant logic that proposes that the value creation process occurs when a product or service is consumed or used rather than when it is manufactured (Payne, Storbacka, & Frow, 2008). Therefore the customer always becomes a co-creator of value as there is no value until the product or service is utilized by a customer. As a result, the customer's perception is crucial to determine the value that has been created. If you buy a liter of milk it has no value to you until you drink it, just as if you buy an airplane ticket it has no value to you until you have traveled. As has been stated earlier in this paper, knowledge is an important source for gaining competitive advantage and considering the importance of the customer's perception in the value creation process, the focus should always be on the creation of knowledge from a customer point of view. The service-centered dominant logic assumes that the roles of the customer and the supplier are in consolidating their knowledge, working together towards creating value; to build on learning and knowledge. Furthermore, the relationship is interactive, individual and long-term (Vargo & Lusch, 2004). Combining customer knowledge gained from three customer communication platforms discussed in this paper with the value creation process emphasizes the importance of such tools. Knowledge and innovation are compelling dynamics for success as noted earlier, and organizations can create value with customer knowledge.

As the managerial mindsets change, so have the roles of the customers. Prahalad & Ramaswamy (2004a) point out the paradoxes in the twenty-first-century economy: "Consumers have more choices that yield less satisfaction" and "Top management has more strategic options that yield less value" (Prahalad & Ramaswamy, 2004a, p. 4), and suggest that to react to this the value creation process needs to evolve. They propose that the value creation process has to be centered on co-creating value with customers. Consumers have access to large amounts of information, resulting in knowledgeable individuals changing the competition- and business atmosphere. The power of online communities enables customers to be relatively prejudiced towards an organization. Consumers can also use the Internet to experiment and compare products (Prahalad & Ramaswamy, 2004a). Organizations must feel the pressure to innovate and constantly be thinking of renewal. Consumers are not dependent solely on communication from the organizations, but can base their relationships with the organizations on their own views of how value should be created for them (Prahalad & Ramaswamy, 2004b). This is

particularly evident on Internet sites, as the success of the website Ebay illustrates. Online auctions allow the customer to pay according to their own preferences and at the price they value, instead of the company's cost of production. Prahalad & Ramaswamy (2004a) further argue that the experience of purchase is important. This view further enhances the importance of knowing the needs and wants of a customer.

3.3.2. The Degree of Novelty

As innovations are about functional or symbolic improvements, the degree of novelty can be different in every innovation effort whether the improvement is incremental or radical. There is a difference between the novelty of innovating a sliding sunroof top of a car and bringing a new concept into the car industry with hybrid car engines. Radical innovations provide something new to the world by changing industry conventions or changing customer expectations. Incremental innovations are more minor, step-by-step improvements done by companies to enhance their existence and gain competitive advantage. Although radical and incremental innovations differ in novelty it is the perceived degree that can be significant. The interpretation of different individuals and industries can blur the distinction between the two, e.g. one industry considers some innovation as a breakthrough but another does not (Tidd & Bessant, 2009). Radical and incremental innovations are both important for the economic prosperity of a firm. Tidd and Bessant argue that to flourish in the long term, most companies need to simultaneously exploit their current product lines by constantly improving them with incremental innovations, and explore possibilities of developing a radical, breakthrough innovation (Tidd & Bessant, 2009).

Further, the management practices of each innovation type is different as radical innovations are more risky and can transform a product or a process but incremental innovations are more common, e.g. new product features; enhanced capabilities or improved efficiency, which are achieved on a regular basis. Some companies strategize by dividing their innovation efforts by separating radical innovation from the main company and work on them in an independent section, i.e. operate breakthrough efforts in structurally independent units. Operating an ambidextrous organization is a known strategy of dividing the exploitation efforts (incremental innovations) and the exploration efforts (radical innovation) from

one another into separate units to limit risk and conflict of interest (Davenport, Leibold, & Voelpel, 2006; Tidd & Bessant, 2009; Kuratko, Morris, & Covin, 2011).

3.3.3. The Innovation Space

Innovation can take on several forms depending on the concept the innovation is changing, and whether it is a radical or an incremental innovation. The 4P's framework of innovation explains how innovation can be divided into four categories; product/service innovation, process innovation, position innovation, and paradigm innovation (Tidd & Bessant, 2009). Figure 5 depicts the innovation space, the four Ps and how different kinds of change leads to innovation, either radical or incremental change. The innovation space can benefit to any organization that is either exploring new opportunities or exploiting current ones. If an organization is currently working on optimizing their product or process innovations, there could yet lie some other opportunities in the innovation space, e.g. to explore further position innovation or paradigm innovation.
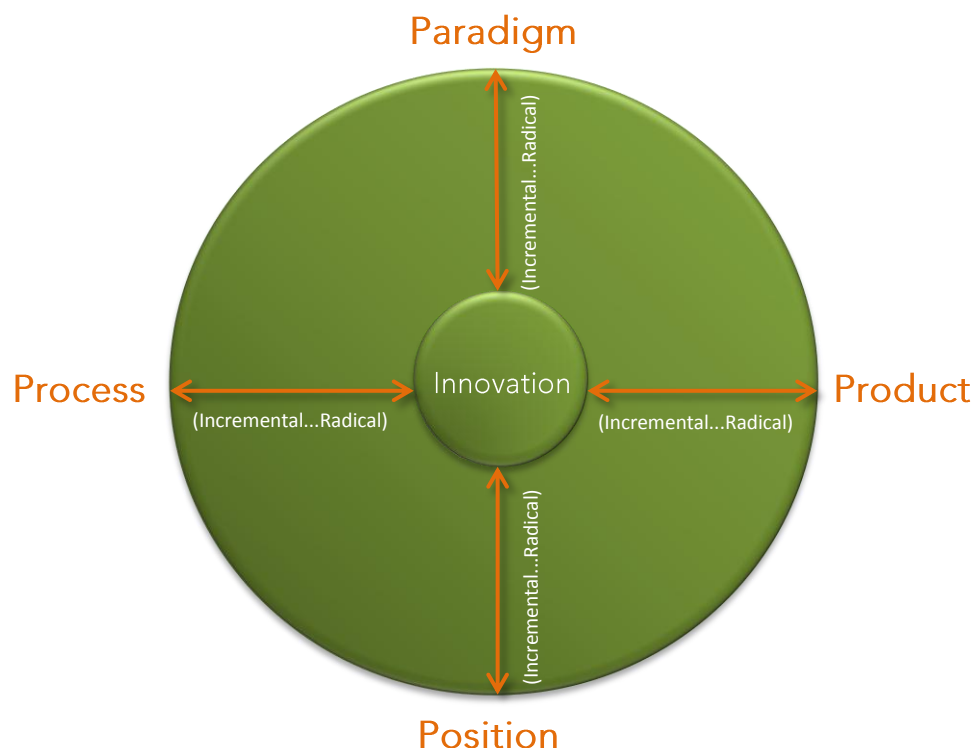

Figure 5: The Innovation Space (Tidd & Bessant, 2009)

Product innovations are changes in a company's offerings (product or services), for example new product development or packaging. An example of a radical product innovation would be the introduction of the digital camera at the time when only film cameras existed. An incremental product innovation would be the introduction of a digital camera that also had the ability to record video. Process innovations on the other hand reflect the changes in the ways which products or services are created and delivered. Examples of process innovations are changes in the distribution or the manufacturing procedure that provide more efficiency and effectiveness, e.g. manufacturing the same digital camera twice as fast. Position innovations occur when the context of how a product or service is promoted changes, i.e. in marketing, communication or when a new target audience is established. An example of position innovation would be a digital camera marketed for children. Paradigm innovations are innovations that change the underlying mental models, those that frame what the organization does - a sort of a paradigm shift in approach or underlying assumptions. An example of a paradigm innovation would be a company producing digital cameras that decides to use the knowledge and technology it possesses and produce mobile phones with built-in digital cameras. Having this view of the innovation space, i.e. recognizing the variety of potential innovations can prove useful to companies' innovation activities. Realizing extensiveness of possibilities available and exploring all fields of the innovation space could increase companies' innovativeness.

In the innovation economy, the value which products and services offer consumers can sometimes be in the form of identity depiction and development. Products and services are interpreted differently; using body lotion from the Body Shop (where emphasis is placed on environmentalism) gives a different meaning to a consumer than using body lotion from Chanel (where emphasis is placed on luxury). Hence, the innovation space has enlarged, product innovations can offer no new product features other than the meaning they provide for the customers' identity. The value attached to the product or service provided can now be extended to comply with consumer's different symbolic and cultural needs and much more complexity and depth is allowed in the innovation process (Borghini & Carú, 2008). The three customer communication platforms can offer companies valuable knowledge about their customers; knowledge about customers' emotions and feelings towards their symbolic needs as well as knowledge about their essential pain points.

3.3.4. The Innovation Process

In order to enable the renewal of any organization one has to see innovation as a core process, which needs to be organized and managed. Tidd & Beassant (2009) offer a simple model of four phases from turning ideas into reality, implementing them and ultimately capture the value for managing innovation. As innovations should be carried out as a core business process within organizations, managers need to form a common understanding throughout the organization. In order for organizations to explore their opportunities towards being innovative, the decisive part that knowledge plays becomes even more critical as the innovation space enlarges. The model for the innovation process can be seen in figure 6.

Search → **Select** → **Implement** → **Capture**
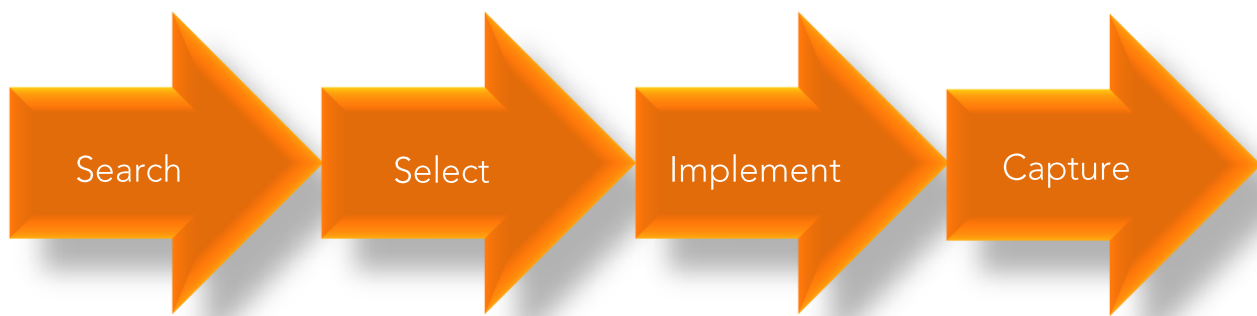
Figure 6: The Innovation Process (Tidd & Bessant, 2009)

The first phase is searching for opportunities. The question of how we can find opportunities and where to look becomes the first phase of innovating. The three customer communication platforms offer companies a variety of choices for searching through customer knowledge and can offer opportunities to exploit that knowledge for innovation purposes. Some knowledge gained from customers can serve as an inspiration for further exploration by not only discovering customers' pain points but also by offering solutions to potential problems. The next phase in the model describes the selection part which follows the search for opportunities. In each platform different tools are used to carefully select the relevant opportunities, which can offer a chance to be exploited further. The questions that managers

need to answer in this phase are where the opportuinities lie and why would they be admissible for going further in the innovation process. The tools require additional knowledge from the company to recognize why this specific opportunity is selected to continue. The third phase is implementation, i.e. how the company is going to implement the opportunitiy as a potential succesful innovation, as well as launching it in an internal or external market. In this phase of the process, the company needs to identify a possible market, the target audience and reduce any risk involved in the implementation. The final phase is capturing the value. Any innovation must generate value to the customer; how exactly will the customer benefit from this innovation and will he or she chose to take part in creating that specific value? The value it brings to the organization is also part of the capturing phase in the process, which is essential to enable the organization to continue on its path towards prosperity.

3.3.5. Knowledge and Innovation

The links between knowledge and innovation on the one hand, and innovation and organizational economic success on the other, have become increasingly apparent in the last few years (Asgarian, 2012). Evidence shows that successful innovative companies receive 75% of their revenues from new products or services, ones that did not exist five years ago (Smith, 2006). Therefore, knowledge has assumed a driving role in organizations' value creation. This is because innovations come about when organizational members share knowledge and transform it into explicit forms of new products or services, new processes, new paradigms or new positions. Knowledge acquisition, i.e. searching for, recognizing and making use of new knowledge from outside organizational boundaries, such as customer knowledge, increases the possibility of knowledge creation in an organization (Asgarian, 2012). Using customer knowledge means that an organization has a larger scope for attaining knowledge, which increases the likelihood of new knowledge being created through increased organizational learning and innovation. In addition, using customer knowledge can in some cases become a barrier for the competition as building a good relationship with the customer will restrain the competition's knowledge acquisition as it cannot be duplicated (Paquette, 2006). As discussed earlier, knowledge is an important organizational asset that must be managed in order to foster innovation. In order to leverage knowledge for the creation of value and enhancement of organizational effectiveness, Knowledge Management is crucial (Asgarian, 2012). This statement can be supported by the results of a study by Cantner, Joel and Schmidt on German companies, which reveals that companies that apply

Knowledge Management perform better in terms of higher-than-average shares of turnover with innovative products compared to their twins (2011). With the extensive amount of information and knowledge available to individuals and organizations in the connected and global economy of today, the need for managing knowledge has become even greater.

3.3.4. Conditions for Using Customer Knowledge

After having established important linkages between knowledge and innovation, we question which conditions must be in place for companies to make use of customer knowledge for innovation purposes. These conditions refer to the organizational capabilities, the external position, internal infrastructure and culture of a company that enables this kind of knowledge to be used in the innovation process; enablers as Tollin calls them, the conditions for knowledge management towards innovation (Tollin, 2008). The importance for managers to recognize these and implement, is monumental for the successful adoption of the customer knowledge from the three platforms into the innovation process. The enablers and capabilities can be viewed from an innovation or knowledge management perspective and vary a bit. There are also various transitions companies must go through when first starting to use customer knowledge for innovation purposes.

An innovative company deals with the creation and maintenance of an innovative organizational context, i.e. the structure and culture must represent the values and believes that support innovation. When we think about innovation and how to manage it efficiently, our idea is that companies need to eliminate bureaucracy, complex structures and enable communication throughout the company in order for ideas to flow between people. Tidd & Bessant (2009) discuss this topic and which elements companies need to integrate in order to make use of innovative efforts. To have the will to innovate within the walls of an organization, everyone must have a shared vision and a shared sense of purpose. Top management also plays a crucial role in innovation efforts. Every decision and choice made by top management influences considerations, performance and support for innovation, that additionally influences the creativity of employees and entrepreneurial mindsets. Furthermore, innovation is a corporate task that involves every function of the organization to be involved, e.g. production, marketing and administration, and thus the need for flexibility becomes more important between functions. Among employees there is a need for some key individuals that play the role of facilitators.

These people possess knowledge regarding specific innovations, know how to interpret knowledge from customers, and are able to include others if necessary in the innovation process. These persons can be internal or external to the company (Tidd & Bessant, 2009). For the platforms to act as a source of knowledge from customers, require a key person to facilitate the process of gathering customer knowledge. Many organizations even outsource such routines to be able to optimize their efforts towards innovation. In addition, research has shown that the most effective teams are those which have different backgrounds and approaches that could be of relevance when key individuals are chosen (Tidd & Bessant, 2009). These conditions apply to both incremental and radical innovational efforts.

From a knowledge management perspective the conditions are somewhat the same as above, e.g. structure, culture and leadership or top management. However, Nonaka, Toyama and Nagata claim that a company's reason for being is to continuously create knowledge because only through its knowledge and skills is a company able to innovate new products or improve existing ones (2000). And as knowledge without context is just information, the context plays a large role in the innovation process. The concept of 'Ba' roughly meaning a place (not necessarily a physical place), is the shared context in which knowledge is shared, created and utilized. In the knowledge creation and innovation process, leadership is especially important as it gives will and direction to the organization and has an effect on how efficient the knowledge creation process is. This is done by creating a knowledge vision, configuring various 'Ba' and fostering an innovative organizational culture (Nonaka, Toyama, & Nagata, 2000). Besides leadership, culture and knowledge vision, Nonaka and colleagues suggest three other conditions within the firm that need to be considered; the organizational form, incentive system, and organizational routines. The boundaries of the organization and the knowledge vision can be viewed in relation to outside knowledge, e.g. knowledge from customers. The knowledge vision determines the purpose and mission of attaining new outside knowledge, which affects the boundaries of the organization thus should synchronize with the entire organization as to what knowledge it has to create and foster from the outside. Although knowledge has no boundaries, since any form of new knowledge can be created regardless of the organization, it is important for organizations to have a knowledge vision that goes above the boundaries of existing products and services, and enables the organization to focus on certain areas of innovation. Knowledge that is applicable for innovation purposes within organizations requires extensive communication between people, as much of the

knowledge that is gathered through the platforms is tacit (Hislop, 2009). With the use of every platform, companies need to establish a knowledge vision to be able to recognize what to look for and where to direct that knowledge.

In terms of the two latter platforms, social media and netnography, more organizations are recognizing the power of the Internet as a source for customer insights. Sawhney, Verona & Prandelli (2005) for example examined the distinctive capabilities for customer engagement that organizations can use in order to facilitate collaborative innovation through the Internet. They presented two cases to illustrate how the process works in practice. One case was from the motorbike industry and the other from the pharmaceutical industry. Both cases were chosen for their remarkable collaborative innovation efforts through the Internet. The organizations went through significant transformation as they integrated collaborative innovation. Some functions had to be reorganized; the marketing department was coordinated around community management that oversaw customer knowledge from the Internet, i.e. netnography for example, which was also tightly linked with the innovation function. New organizational roles were created to manage the continuous customer knowledge sharing and selectively distributing the knowledge to the right departments within the organization that would benefit from this particular information. In one of the cases a whole new e-based function was created in order to manage the knowledge gathered from the Internet.

With the amount of knowledge gained through the platforms, organizations need to integrate more advanced processes to manage the knowledge effectively by redesigning the support to all business units. An additional support unit might be needed in order to manage the dialogue with consumers and use the knowledge to optimize the innovation processes and the constant renewal that today's market demands. The most important point to be drawn from the literature on innovation, knowledge management and the above mentioned real life examples, is that there needs to be a key individual or individuals that manage the collection of customer knowledge and have some sort of a centralized function that is well connected to other business functions. These individuals oversee and facilitate innovation efforts from knowledge that is generated from the customers. Thus they can clarify the knowledge vision and the purpose for generating that particular knowledge. As the market evolves quickly, organizations don't need to know everything and be good at everything. Experts on any subject, e.g. neuromarketing, netnography or social media agencies, are available as well as

communication applications that can be helpful for organizations that lack the expertise involved in gathering customer knowledge.

3.3.5. Customer Knowledge and Co-Creation

This paper is based on the view, as argued in the preceding chapters, that knowledge enables innovation in organizations. Knowledge is the essence that connects the three customer communication platforms to innovation. The knowledge gained from customers is especially valuable for an organization (Vargo & Lusch, 2004; Prahalad & Ramaswamy, 2004a; Davenport, Leibold, & Voelpel, 2006). The customers appraise and create the value, and their perception and opinions are therefore decisive, which is the main reason for further involving them in the innovation process. Consumption is driven by different factors that vary due to cultural differences and companies must understand these different drivers. The same offering will have different meanings for different consumers, and will have a different purpose for different individuals. Consumers have to be involved and understood, since the concept of consumption has transformed into being a process of identity construction, and identity is highly embedded in the cultural background of each and every individual.

Several authors and scholars have discussed the notion of co-creation since the early 2000s. Prahalad & Ramaswamy introduced the concept in 2000, arguing that customers are no longer satisfied with making "yes or no decisions" on what organizations offer. Value has to be created in cooperation between the organization and the customer, and every transaction must be a part of the purchase experience (Prahalad & Ramaswamy, 2004a; Prahalad & Ramaswamy, 2004b). Every individual is different from one another. Roser and colleagues (Roser, Samson, Humphreys, & Cruz-Valdivieso, 2009) further define co-creation as an active, creative and social process, based on collaboration between an organization and consumers, and one that is initiated by the organization to generate value for both the organization and customers. Although the concept co-creation seems to be very forward and innovative in nature, customer knowledge has always played a crucial role in product innovation. The novelty of co-creation is the idea that organizations should look further than the boundaries of the organization for knowledge to enhance innovation. Eric von Hippel has researched the contribution of customers to Research and Development departments since the early 1970s. His conclusion, that most product innovations were not coming from the organizations but from the end-users of products (Von

Hippel, 1977), confirms that listening to customers can help the process of innovation. For years, organizations have collected knowledge and preferences from customers through the traditional tools available e.g. panels, focus groups and surveys. As technology develops, more communication channels become open between companies and their customers, the three communication platforms introduced in the paper just being three of various new ways of locating customer knowledge.

3.3.6. Processes for Attaining Customer Knowledge

Certain techniques have proved valuable in order to efficiently and effectively use the knowledge gained from the social media and netnography platforms for innovation purposes, and to motivate customers to participate,. Mukhtar, Ismail and Yahya (2012) define co-creation techniques as methods that can be used to activate customers to become resources for ideation and/or as partners in co-developing or co-producing the company's products. They reason that these techniques can be helpful in product or service innovation as they are ways of acquiring customer knowledge. Below are some of the techniques they suggest, in particular those we find relevant to the three customer communication platforms.

∞ Participatory method: end-users are treated as experts and companies jointly create products or services that will benefit the end-users. Usually this is done in a workshop or a co-operative setting, but using knowledge from customers through the internet, we argue, can be just as effective. Using netnography to analyze the consumers online can effectively identify experts of different issues, who then can, for example, be contacted and invited to virtual workshop sessions and thus co-creating in the innovation process. Using social media applications for this purpose can also be an option, as it offers interactive communication between a company and its customers, e.g. through the company's Facebook site. The Facebook page thus serves as a workshop domain where the firm's followers (people that have "liked" the page) are treated as experts and are engaged in a discussion with the firm in order to improve existing products or services or identify new needs.

∞ Emphatic design: a technique in which researchers observe the customers in their own environment as they use the company's product or service. With this method companies hope to pinpoint hidden customer needs. The knowledge gathered with this method is then used for product or service development purposes. This technique combined with the internet is the essence of

netnography. The internet offers countless opportunities for using this method, although customers are not observed in a face-to-face setting but a virtual one. Observing social media sites like YouTube, Pinterest or blogs that a company's product or service is being used in, can offer the company significant knowledge about how its customers use their product, and perhaps identify problems the customers are having. This information serves as an insight into how the company can better accommodate the customers' needs.

∞ Co-designing: a mixture between the two above mentioned techniques which involves the company jointly articulating ideas and concepts with its customers using generative tools, (e.g. prototypes) that can be used as aids for verbal or visual communication. This technique is widely used with help of the Internet, e.g. the children's clothing producer *Name it*, mentioned earlier in the paper, posts pictures of prototypes of its newest clothing on its Facebook page and receives comments from its followers, producing discussions between the company and its customers often leading to enhancement of the final product.

∞ Use of artifacts or prototypes: customers are given an object which is used to represent a currently-non-existent invention. The customers record and articulate to the company their experience of using it, with the aim of discovering a new need or new ways of using the supposed invention or service related to it. This method could be used along with neuromarketing, i.e. knowledge about the customers' attention, engagement and emotion can be studied with neuromarketing techniques while the customers are using the artifact during which time the customers also articulate verbally on how they are experiencing the artifacts.

∞ Lead user approach: a method of using virtual communities to convince lead users to engage in information systems development. The lead user approach can also be used to attain insight for future demand, i.e. companies can identify lead users through online expert communities and use knowledge from these lead users to innovate.

∞ Toolkits for ideas competition: companies create competitions between their customers in hopes of tapping into customer ideas for product development. With this technique, companies can, for example, gain insight into the desires and longings of customers, e.g. how they envision their dream product, or host competitions for the best solution for a problem facing a corporate innovation initiative. Social media sites can be ideal platforms for such competitions and many companies using social media have used this technique.

∞ Community based innovation method: community members are treated as resources for ideas and co-creators of products or services. These communities can be organized in virtual settings or real ones.

The neuromarketing platform does not require such methods for encouraging customers to share knowledge as most companies recruit customers by offering some kind of reimbursement for their participation. However, as noted above, using artifacts or prototypes in a neuromarketing study could prove useful in the process.

3.4. Discussion and Reflection of the Literature

So far the literature review presented has delivered a structure and discussion of customer knowledge from three sources in connection to corporate innovation, and presented a concise set of definitions of key concepts. Based on the identified literature, we have developed a preliminary categorization of the customer knowledge that can be attained through the three platforms. Overall, this review assesses how to use customer knowledge, i.e. what kind of knowledge is generated through the platforms, the nature of the processes of generation and selection, and which conditions need to be in place in order to make use of customer knowledge for innovation. Although knowledge has been recognized as a resource that companies can make use of for optimizing their economic progress, there does not seem to have been much development in the knowledge management literature for the last twenty years. However, over these last twenty years information technology and communication platforms have developed substantially. This development can be acknowledged by Moore's law which states that computer technology in fact doubles every two years (Robison, 2012). The three customer communication platforms the paper focuses on are in fact based on new and developing technology and as a consequence there seems to be a compelling argument for researching how the knowledge management literature can advance with these platforms.

Furthermore, the three platforms as a source for customer knowledge intended for use in the innovation process has not received much attention in the literature, as the platforms have mostly been used for marketing purposes. This applies particularly to neuromarketing, but applies to the other two platforms as well. We have established a link between knowledge and innovation and the importance of seizing

customer knowledge to stay competitive and for the renewal of every organization. With the link between each platform and customer knowledge we have thus argued for and demonstrated through the literature how this is connected to corporate innovation. Therefore, it seems to present a compelling argument for using the platforms for innovation purposes.

We propose a framework that explores the knowledge management dimensions that need to be connected and reflected upon when using customer knowledge through the platforms for innovation purposes. Karin Tollin presented a framework that touches upon all aspects of the knowledge management concept (2008). The framework builds on findings of diverse leading scholars within the field, and summarizes the relevant attributes of knowledge management with regard to innovation (e.g. (Johnson, Lorenz, & Lundvall, 2002; Polanyi, 1966; Davenport & Prusak, 1998; Von Krough, Nonaka, & Aben, 2001; Gold, Malhotra, & Segars, 2001). The figure below depicts Tollin's framework. The framework is intended to have a perspective broad enough to apprehend the decision context of managers, yet explicit enough to identify how knowledge management can be used for product innovation (Tollin, 2008).
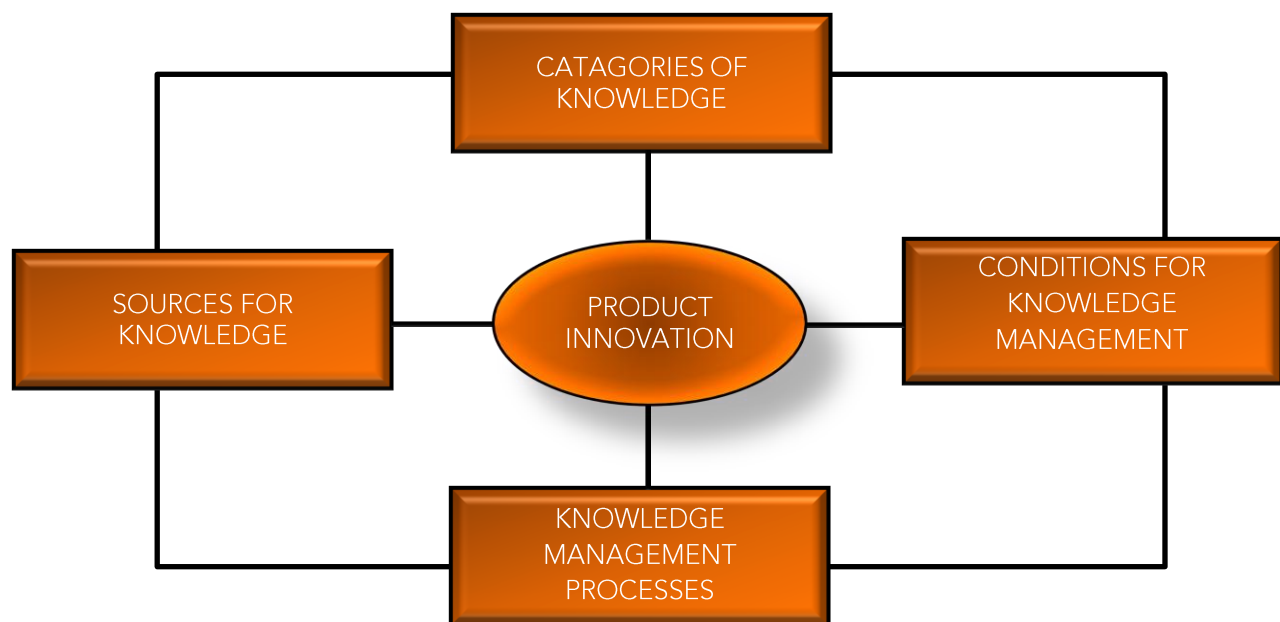
Figure 7: Four aspects of Knowledge Management (Tollin, 2008)

The framework we suggest for using the three platforms as a source of customer knowledge for innovation purposes uses Tollin's framework as a foundation. Our framework is adjusted to better represent the focus of customer knowledge, and focuses on innovation in general, rather than focusing on product innovation specifically. The four dimensions of the framework thus become 'Categories of Customer Knowledge,' 'Sources for Customer Knowledge,' 'Customer Knowledge Management Processes' and 'Conditions for Customer Knowledge Management'.

The table below (figure 7) illustrates the framework we suggest, based on the literature. As the essence of the neuromarketing platform is quite different from the other two, the major differences between the categories of knowledge can be noticed there. The categories of knowledge provided by the social media and netnography platforms can be assumed to be generally the same. The processes of generating knowledge through social media and netnography are also similar, though the social media platform offers a broader range of techniques as it is an interactive platform. Neuromarketing, however, presents the fewest possible processes, as perhaps can be expected, as the platform is in itself an established scientific technique. We expect that the fundamental conditions for using the platforms for attaining customer knowledge for innovation purposes are more or less the same for each platform as all platforms are in themselves new and innovative ways of gathering customer knowledge and as such require similar conditions to be met.

SOURCES OF CUSTOMER KNOWLEDGE	NEUROMARKETING	SOCIAL MEDIA	NETNOGRAPHY
CATEGORIES OF CUSTOMER KNOWLEDGE	Tacit, Know-what	Explicit and tacit Know-what Know-why Know-how Know-who	Tacit and Explicit Know-what Know-why Know-how Know-who
CUSTOMER KNOWLEDGE PROCESSES	*Generation:* Artifacts & Prototypes *Selection: Experts, Consulting Companies*	*Generation:* Participatory Method, Emphatic Design, Co-Design, Lead User Approach, Techniques for Ideas Competition, Community based innovation method *Selection: Experts, Consulting Companies, Analytical Models*	*Generation:* Participatory Method, Emphatic, Lead User Approach, Community based innovation method *Selection: Experts, Consulting Companies, Analytical Models*
CONDITIONS FOR CUSTOMER KNOWLEDGE MANAGEMENT	Flexibility and uncomplicated Structure Innovation and knowledge facilitator Knowledge vision and shared beliefs Effective leadership	Flexibility and uncomplicated Structure Innovation and knowledge facilitator Knowledge vision and shared beliefs Effective leadership	Flexibility and uncomplicated Structure Innovation and knowledge facilitator Knowledge vision and shared beliefs Effective leadership

Figure 8: The theoretical framework

Finally, to tie together the literature with our above mentioned framework, figure 8 (below) illustrates the process of knowledge creation through and with the platforms, and how this knowledge needs to be managed within a company to result in innovation. The customer communication platforms are portrayed as the source of customer knowledge and thus generate knowledge that circulates within the organization. New knowledge is created as this knowledge is shared, as described by the SECI model, which demonstrates the spiraling process of knowledge creation and which flows continuously through the organization. The arrows depict this connection and illustrate the knowledge flowing continuously. The innovation and innovation management literature reviewed in the paper discusses different degrees

and types of innovation; radical and incremental, and product, position, placement or paradigm innovations. Accordingly, the innovation space is large and the possibilities an organization might have for renewal, addition, alterations or other valuable novelties can be endless. An organization has to manage its innovation efforts as its core process and capture the value that the innovation represents. Tidd & Bessant's (2009) model of innovation management as shown in figure 6 (Chapter 3.3.4.) disseminates the four steps that organizations need to consider in the innovation process. The intertwinement of knowledge management and innovation management will be further explored during the analysis of the research.
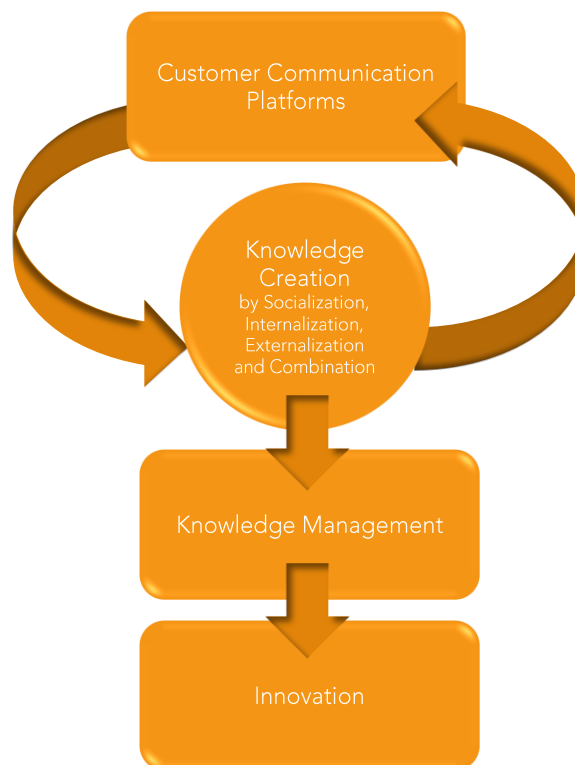

Figure 9: The intertwinement of the Customer Communication Platforms, Knowledge Management and Innovation

4. EXPERT INTERVIEWS

> In the following chapters the research will be assessed in relation to the literature. The chapters are presented through the framework developed in the discussion and reflections chapter of the literature review; the processes of using the platforms for innovation purposes, the categories of customer knowledge gained from the platforms and the conditions for using customer knowledge through the platforms. We begin however by analyzing what the experts had to say about the relationship between customer knowledge and innovation. We will conclude by giving our own reflections on the research and determine what, if any, additions can be made to the framework based on the research findings.

4.1. End-Users as the Starting Point

When the experts were asked how important they consider customer knowledge to be in the innovation process their opinions were unanimous. The experts in innovation were very clear: "It's everything! I don't think you can disassociate it" (Huon, 2013). Hannah Zenk further reflected on customer knowledge as being the core of innovation. In the innovation process humans need to be put first, i.e. human values and needs, even for products or services where no end-user is involved, i.e. business-to-business transactions, the focus should always be on the stakeholders involved. When designing innovations the most important thing is to observe the behavior of people, offline as well as online, and retrieve as much customer knowledge as possible (Zenk, 2013).

Huon suggests that innovation is all about figuring out what challenges people face today, what their pain points are and how those gaps can potentially be filled. The customers are always the starting point for innovation. "Understanding customers and what customers want, particularly in this modern world where there are so many options for smart companies to understand their customers, through social media or having a conversation with their customers; it is probably the most important way for a company to be innovative. I think that innovation leads to competitive advantage and differentiation and from there you get to growth (Huon, 2013).
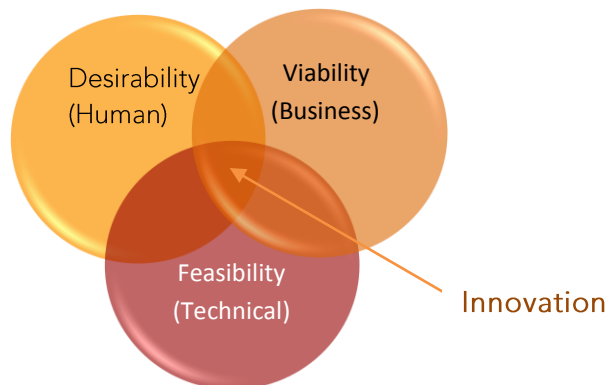
Figure 10: The Core of a Successful Innovation (Ideo, 2013)

Vanessa Monogioudis explained that innovations have to make sense from three perspectives; business, technical and human. She claimed that usually companies are good at understanding the importance of the business perspective and the technical perspective, but innovations always have to start from the human perspective, and that's where the most potential value lies. If you imagine each perspective to be a circle, innovation comes from the place where all the circles meet (see figure 10) (Monogioudis, 2013). The ability to innovate something that makes sense from the human perspective depends on customer knowledge and the ability to manage that customer knowledge.

4.1.1. Neuromarketing as Design

David Lewis, the neuromarketing expert, responded to the question of how customer knowledge gained through neuromarketing techniques can be useful in the innovation process in the following way: "I think it can be. I think essentially innovation is a human skill. There are computer programs which are remarkably clever, remarkably creative, and can in the terms of mathematics, develop algorithms which can solve problems in a very innovative way. But I think when it comes to product development it is still a human skill and likely to remain so for some time to come. Where neuromarketing is concerned I think it can be used to assist by actually enabling the product to be tweaked in small ways, to make it more desirable for the consumer. The consumer will have a stronger emotional impact to it" (Lewis, 2013).

He further reflected on how much effort, energy and brainpower essentially goes into the development of a new product. He recently worked with a fast-moving-consumer-goods company that was working on an innovation, a male grooming product which will eventually be sold for less than ten British Pounds. There were a number of experts, all of whom held PhDs, who worked on making the final product as perfect as it can be. His neuromarketing skills were put to use in order to make a stronger

emotional response from consumers, which he suggested can be done with quite small and subtle changes - such as the color scheme or changing some small parts of the design, the texture, the aroma or the shape - can make a huge difference to the effectiveness of the product.

"I think that in the gloom of the marketplace where the competition is so intense, it's going to be the small differences which are going to make the sage difference between the sale [whether the product will sell or not], and I don't just mean the product design, I mean the way it's advertised, the way it's marketed, the way social media picks up on it, which as you know is hugely influential these days in whether it sets the world on fire or just falls into the bottomless pit of products which never quite made it" (Lewis, 2013). Hence for all types of innovations - whether a product innovation, process, placement or paradigm - attaining customer knowledge with help of neuromarketing can be useful in the innovation's success. In Lewis' opinion the small differences that can be made to make the final offering have a stronger emotional effect on customers can have a huge meaning to the success the offering will have in the marketplace.

4.1.2. Social Media as Co-Creation

Niels Kornum, the expert on social media and innovation exclaimed "Yes! Of course it's [customer knowledge in the innovation process] very, very important" (Kornum, 2013). He explained that what really moves today's customers is if something relates to them; the image they want to portray or the feelings they have about themselves. Thus gathering such information is highly valuable for the innovation process. "The company should try to understand who the customers are, what are their core values, do we have different groups with different core values, what are their lifestyles and hobbies and so on" (Kornum, 2013). He further discussed how companies, especially those with strong brands, can engage their customers in the innovation process, sometimes even bringing new knowledge into the company with their own initiative. He illustrated this with the example of Lego, which regularly receives innovations from their customers and then pays them a certain percentage of the sales of that particular product. Lego has even managed to build such valuable relationships with some customers that they participate in the innovation process without any kind of reimbursement, some even paying their own airline tickets to be able to attend ideation workshops. Social media thus not only serves as a

source of customer knowledge but allows companies to engage their customers by relating to their basic values, thereby increasing their willingness to participate in the company's innovation.

4.1.3. Netnography as Opportunity Detection

The netnography expert, Nayeli Tusché claimed that customer knowledge is extremely important in the innovation process. She noted that customers today are exceedingly well informed, robustly networked and sometimes very capable of developing their own solutions. Today's customers are getting very creative and very oriented towards problem-solving. "At the end you can have really out-of-the-box ideas coming from your R&D department, however it is always important to integrate the consumer. Not only from a market research perspective but also just to ask him "how would you do things?" because at the end he is the one that is going to buy the product, he's the one that is going to use the product. Why shouldn't you include him?" (Tusché, 2013). Tusché further pointed out that in the innovation economy there are endless possibilities for reaching your customers, understanding their needs and involving them in the innovation process. It is important for companies to reach out and take advantage of the possibilities. The use of customer knowledge should not be limited to the beginning of the innovation process or the end, but should be regarded as equally important throughout the whole process.

Tusché stressed that even though netnography can be a helpful market research tool, it offers great potential as an innovation tool as well. As an innovation tool it can offer companies inspiration, solutions and the possibility of spotting consumer trends. She clarified that as an innovation tool it can give you a lot of inspiration when you look through social media sites, e.g. Pinterest, where you can view the different pictures users are posting. This can also reveal information about solutions from consumers, i.e. sort of home-made solutions to their problems, or you might identify a new trend. As an example she mentions cupcakes which some years ago nobody would talk about, and through netnography you can notice that today every bakery- or confectionary online community is talking about cupcakes. As an example of how netnography can reveal information about solutions from consumers, she stated that there are a lot of Internet users writing about how they have solved the major pain points of using an offering, or how their solution for the shortage or deficit of offerings satisfying

a certain need, or even solutions users have provided for other users. All this customer knowledge is accessible to anyone online, and taking advantage of it can provide great opportunities (Tusché, 2013).

4.2. Technology, Comprehension and Perception

The processes of using the three platforms for innovation purposes differ, as can be expected due to their different nature. While the neuromarketing platform relies greatly on technology, the other two depend more on the researcher's comprehension and perception of online dialogue. The following chapters explain the interviewees' perspectives of the processes involved.

4.2.1. Understanding End-Users' Attention Levels and Arousal

Lewis described how the neuromarketing technology can indicate what is going on, on a very deep level inside consumers' subconscious minds when being exposed to different stimuli, e.g. images, odors or fabrics. The techniques offer information on the levels of attention the stimuli provides and when combined with eye-tracking information about which points of a visual stimulus triggers that attention. Neuromarketing techniques can also measure emotional response, whether positive or negative, though it is difficult to actually analyze individual emotions. They can however, be analyzed in terms of approach or avoidance reflecting on whether it might be a positive or negative response to the stimulus. The subjects should not be tested against each other as everybody's brain works differently, but rather people should be tested against themselves. Thus a person's brain could be measured in particular situations, for example by exposing them to a product design (or whatever is being tested) and then compare their responses to brain activity where the responses are known (e.g. very exciting situations). The customer knowledge gained from these techniques can then be used in order to design the product so it becomes more appealing for that particular demographic. The main barrier to the neuromarketing techniques is that each study is quite expensive and therefore the sample pool usually consists of no more than 40 subjects. Lewis however claimed that his company is working on their own innovation, a technique that can provide the same information for a fraction of the price today's technology costs (Lewis, 2013).

The process starts with recruiting consumers which fit the demographic that match the innovation's target group. After the information is attained by a neurologist or any person familiar with the neuromarketing techniques and processes it is analyzed and shared with the innovation team. Lewis estimates that around 90% of the analysis of the data is objective and the rest would have to depend on the subjective evaluation of the researcher.

Lewis stated that the whole point of using these methods is to reveal hidden needs of customers. "If I would want to know some explicit information, I would just ask them. Basically we want to know what is going on below the conscious awareness. Most of our thinking takes place backstage and we're not aware of it" (Lewis, 2013).

4.2.2. Supporting Consumers' Values and Interests

The experts all had opinions on the processes of gaining customer knowledge through social media. Kornum focused on the importance of relating to the basic values of the customers in order to engage them in the company's social media activities. He also pointed out that rather than using social media as a domain for pushing all sorts of marketing efforts on customers, it should be the other way around; companies should provide a platform where they support their customers' core values, interests, etc. As an example he mentioned a groceries retailer, which might be regarded as a boring subject but if particular aspects of the business are highlighted through the retailer's social media sites it could be more attractive; e.g. aspects relating to babies and children. "That relates to some really tough enough feelings that are really a part of our core values. So as a grocery retailer you could set up a community that discusses baby food or baby clothes, or you could set up themes around sustainability, ethical trade and so on" (Kornum, 2013). His assessment was that in relating to these core values companies get more responses from their customers; more customer knowledge.

Huon explained that Ideo mostly uses social media on a later stage in the innovation process. "We might have an idea and we might build a Facebook page to test it. So what we would do is build a product page, put some ads on it, put some money in there to try getting traffic in there, sort of like testing different value propositions; how people are actually reacting to one idea over another" (Huon, 2013). Yet, he says that social media can also be used for ideation. One way he mentioned is to build micro-sites each representing different value propositions, then putting up online advertisements for the

different sites and monitoring which of them most people are clicking on, what they are "liking," and which ads are driving them there. Then analyzing which core of the value proposition people are actually interested in. He demonstrates with an example of an innovation they worked on with a Swiss bank, a savings scheme called One100. The functionality of the savings account is the same but the way it's presented, designed and how it motivates people to save is very different. By analyzing which ads were driving traffic to the site, they realized that if people were saving up for a concrete goal they became more motivated to use the savings account than if they just looked at how much they could afford to save each week or month. Essentially, they are using social media to observe behavior, but also building sites or pages to figure out what people want, what fundamentally drives human behavior.

4.2.3. Identifying User Groups

Tusché demonstrated how attaining and selecting relevant customer knowledge through netnography has proved valuable in the innovation process by offering an example of an innovation she worked on with Beiersdorf (Nivea). The process started with gaining insights from customers through netnography. Tusché and colleagues noticed through their netnographic research, by understanding and immersing themselves into the world of the consumer, that customers' major pain points towards the products Beiersdorf produces were the under-arm sweat stains. Customers complained online about white t-shirts getting yellow stains, black t-shirts getting whitish-grey stains and in some cases these stains would ruin their clothing as they would not come off when the t-shirt was washed. One of the consumer insights provided a description of each different type of stain and most importantly also a home-made solution for getting rid of each type of stain; baking soda for some types, vinegar for others, etc. In this case, netnography not only provided knowledge about customers, i.e. knowledge about their pain points, needs, feelings, desires, etc., but also knowledge from customers, specific solutions which had tremendous implications for the new product development. With this customer knowledge Tusché worked with the R&D department internally developing chemical solutions, but also in this phase different solutions were presented to customers. The customers were asked which ideas they saw the most potential in, which solutions would effectively solve their problems. The final product turned out to be a deodorant instead of the washing powder, which had been the original idea they worked with. A deodorant called Black and White, which does not leave under-arm stains in your shirts. Tusché said that Beiersdorf are stating that it's the most successful deodorant launch in the

company's history, which she says really attests to the value of using customer knowledge in the innovation process (Tusché, 2013).

Tusché explained that the process of attaining customer knowledge can be divergent. It is important to identify different kinds of users. When using netnography for the purpose of ideation and inspiration for radical innovations, observing expert communities proves to be most useful. In such communities lead users can be found, which often provide customer insights on future needs and future trends (Tusché, 2013). In some cases there are only few such communities to be found, i.e. those that consist of very involved experts on the particular topic in question. "Maybe there will only be four communities, but I know that these four communities are really, really expert pools, a small pool of lead users, meaning consumers that are very unsatisfied. And because of this, they are developing their own solutions; they are anticipating needs that may be very general in ten years maybe. In this case, I will not be very interested in how representative it is, but rather interested in developing radical ideas, radical innovations, lead users are very important in this process" (Tusché, 2013).

The process of developing incremental innovations would on the other hand depend more on observations of mainstream communities, more normative and wide-spread observations of Internet activities of users, e.g. observing advice communities where anyone from new mothers to grandfathers, from students to professionals or just the average Joe is going to post. Even though it would not provide all these tremendous ideas and solutions it could provide detailed information about the general problems and needs of the average consumer.

The knowledge gained through netnography is then shared with the employees working on the innovation and combined with their own knowledge. Tusché says they try to triangulate knowledge, meaning that they take the attained customer knowledge and combine it with knowledge they have from two different industries. For example, sometimes knowledge from the food industry can be used in innovations in the automotive industry (Tusché, 2013).

4.3. Accumulating Intrinsic Knowledge and Insights

When asked what type of knowledge is important in the innovation process, Huon replied that both explicit and tacit knowledge is important in the innovation process. For more tacit knowledge gathering

Ideo tries to observe customers in their natural habitat. More precisely, a lot of tacit knowledge can be attained watching a customer when he or she is in the process of using an offering and regard how they are behaving: "you need to feel the customers in their natural environment" (Huon, 2013). Furthermore, Huon starts every innovation process by asking the customers what they explicitly need and thus receives explicit know-what knowledge. As previously mentioned, Zenk also discussed the notion of looking for tacit knowledge by observing customers online. Additionally, she indicated the need for distinction between the two different kinds of customer knowledge; knowledge about the customer and knowledge from the customer. She explained that in her opinion, knowledge about customers will be more useful for marketing purposes whereas knowledge from customers can be more useful for innovation purposes. To her, knowledge from the customers is a more important type of knowledge, as tacit knowledge gained from customers is more inspiring. By observing customers in their natural online habitat and figuring out what they might need in the future is based on tacit knowledge, thus really trying to understand their behavior and tacit needs is very valuable for innovation (Zenk, 2013).

Tacit needs of the consumer could be attained from neuromarketing to use in the innovation process - e.g. color, shape, texture or aroma - can be of valuable importance for the innovation without the customers being aware of it (Lewis, 2013). When asked if using neuromarketing for gathering customer knowledge can mainly be used to create totally new knowledge or to build upon exciting knowledge, Lewis claimed it can be used for both purposes. Neuromarketing can be used to confirm or disconfirm a past experience. Any new finding is always valuable. It offers tacit knowledge and more specifically know-what knowledge as neuromarketing could reveal some hidden needs of the consumer. Above all, that is the whole point of neuromarketing, "Basically we want to know what is going on below the conscious awareness. Most of our thinking takes place backstage and we're not aware of it" (Lewis, 2013).

Kornum, the expert on social media claimed that customers are not really aware of what they are posting online. For companies to gain more tacit knowledge, they need to interact with customer on a level more relevant to their values or interests, i.e. something that interests them. If the researcher knows the culture of its sample then it is possible to reveal more explicit knowledge as well as tacit knowledge (Kornum, 2013).

Huon and Monogioudis both explained that they might build a Facebook page to test live-prototyping on the later stages in the innovation process. The Facebook page would be supposed to test different value propositions and measure how people are actually reacting to a particular idea, therefore receiving know-how and know-who knowledge (Huon, 2013 & Monogioudis, 2013). This method of using Facebook to test different value propositions is a quick and easy way to gain know-how and know-who knowledge (Monogioudis, 2013). Ideo also uses Facebook to acquire know-who knowledge regarding recruitment of participants for a study (Zenk, 2013).

Tusché explained what kind of knowledge Hyve gains through netnography with the example of Hyve's successful innovation, the deodorant for Beiersdorf. After observing consumers online, Hyve gained both explicit know-what and know-who knowledge by simply asking the consumer, and tacit know-why and know-how knowledge that led to further enhancements of the deodorant. Tusché further explicated the kind of knowledge gained through netnography with the notion that consumers are getting very creative in their own solutions which can give explicit know-what and know-who knowledge as well as tacit know-why and know-how knowledge. The knowledge gained by a researcher through insights from netnography is: "more like intrinsic knowledge that gets accumulated" (Tusché, 2013) which refers to the fact that knowledge can be tacit to start with and then become explicit after it has been congregated. Tusché further explained the netnography process step by step. To start with the researchers acquire explicit knowledge from observing consumers online. Figuring out where the main issues or problems lie - pinpointing the know-what and know-who knowledge - and getting inspired from there, is one way to identify an opportunity. In some cases, the researchers also get know-how knowledge from a solution made by a consumer online. Different kinds of users provide know-who knowledge. Consumer can be very explicit or as Tusché explains: "I love this language of the consumer, I love that he uses bad wording, I really want to hear his feelings and emotions, where he will show me his true face" (Tusché, 2013). The knowledge can even be so explicit that the researcher gets answers to something that did not occur do him to ask. When asked if netnography could provide customer tacit knowledge Tusché answers: "definitely" because part of netnography is finding out what something really means, something that is not obvious "crucial weapon of netnography is to get implicit information or insight which is not the case for example with a more automatic research when

you have like a crawl up. You get really more in-depth and more implicit information or implicit needs" (Tusché, 2013).

The micro-sites previously mentioned, built to test different value propositions, testing what people are clicking on, showing their preferences and which ads are driving them to the site, can provide companies with know-how and know-who knowledge. The importance of creating micro-sites or a Facebook page as mentioned above is to observe the customers in the most natural form (Huon, 2013). Monogioudis agreed on the notion that observing customers in their most natural habitat is important as it offers opportunities to gain knowledge on different levels, i.e. different kinds of knowledge.

4.4. Innovative Mindsets, Management and Culture

When viewing the experts' point of view with regard to which conditions must be in place in order to use the three platforms to gain customer knowledge, and use for innovation purposes, the answers were similar in nature. All of the experts talked about the importance of organizational structure and Huon, Zenk and Monogioudis at Ideo stressed the importance of realizing that an innovation can initiate from an employee of every organizational level, and the need for less hierarchy. "When I think about innovative company, I say decentralized but people are empowered to do things and make changes." (Huon, 2013)

Our innovation experts from Ideo moreover discuss the innovative mindset that can be attained when different teams of people with different background work together towards an innovation. These kinds of teams will have a broader base of knowledge and a wider horizon, which can be useful in the innovation process. When a junior employee has a great idea, that employee's idea should have the same chance of surviving as some executive's idea.

Lewis considers flexibility as well as the ability to adapt and progress to be very important: "I think a lot of companies are conservative and that is a dangerous position to be in because the world is changing so rapidly" (Lewis, 2013).

The world today is demanding that organizations open up, or as Tusché put it: "If you are open to new ideas you have much more potential to develop new products" (Tusché, 2013).

Organizational culture was mentioned by all of our innovation and online platforms experts. In order to grasp customer knowledge for innovation Tusché explained that organizations need to have the skills to innovate embedded in the culture and that the organization needs to welcome new knowledge (Tusché, 2013). Monogioudis said that an organizational culture that employs different teams consisting of people with different backgrounds is highly recommended. She also spoke about the importance of organizations allowing experimentation and reinforcing an interactive process of learning from each other (Monogioudis, 2013). Huon's definition of an innovative company also applies partly to the cultural perspective; it has to be embedded in a culture that people are empowered to do things and he adds that it is important that companies give their employees the opportunity to act on their ideas.

It is always a question of interpretation of the knowledge from the platforms; how an organization will interpret the data and who will facilitate and predict what customers need in the future. Lewis mentioned in a neuromarketing study 90% of the data is objectively analyzed by mathematicians and neuroscientists but as Lewis said: "I think essentially innovations is a human skills" (Lewis, 2013) that requires interpretation of the data in order to make use of it. For the social media platform, Kornum reflected on what has to come first, i.e. before strategizing social media efforts in organizations; companies can't use social media effectively until they understand what is going on and how customers and stakeholders interact. Social media platforms, in his opinion, do not increase loyalty to a certain brand, but the platform is more about information and this information must connect to a consumer on a deeper level, e.g. as stated earlier the basic values of consumers and something that relates directly to them. In terms of interpretation from a company's point of view Kornum says: "it is difficult to interpret if you don't know the cultural setting [at a certain online platform]" (Kornum, 2013). Kornum explains this with an example of Lego, whereas Lego relates to customers through their hobbies and their love for creating and building something. Lego has a very strong presence online and an abundance of customer knowledge is available to Lego that can facilitate in their innovation efforts. In netnography, Tusché stresses the facilitator's role in the process of attaining knowledge through netnography. To avoid research bias when interpreting data, there has to be a least two researches working on one project. A lot of communication and changing of thoughts will take place during the analysis (Tusché, 2013). With the amount of information available to companies today Zenk claimed:

"you can gather so much data by that [online platforms] but I think the big challenge in the future is going to be how do you use all this data and how to interpret the data" (Zenk, 2013).

Finally, top management plays a big role in innovation as Tusché, Huon and Lewis discuss. Tusché explained that the company's "credo" has to be in line with what it actually acts on, i.e. the company can't state that it is innovative and then not follow up on the statement. Top management's responsibility is to incorporate it into every one of its employees' mindsets as it is difficult to stay innovative if everyone is not behind that credo. Additionally, managers have to believe in openness and "accept that many not all smart guys work for you" (Tusché, 2013). She further explained: "you can have the best tools in the world, but if internally you are against that [looking outside company's boundaries] and find a cool solution but it doesn't fit our corporate identity, then you have a problem" (Tusché, 2013). Huon goes a bit further into the managers' role to be able to manage all these different areas of innovation and making sure that: "they're balancing the day-to-day stuff, making the incremental sort of tweaks in the processes and making them more efficient while running their core business" (Huon, 2013). He continues, stating that the manager's role is also to look further into the future and "think about what are the sort of new areas that we should be focusing on, what's happening in five years, looking at our time horizon" (Huon, 2013). Huon recommends that companies take radical innovations out of the company, "the mother ship," and work on these innovations outside of the main company. Sometimes companies try to apply the same set of metrics as it has done for several years, and which have succeeded for the main company, but managers can't judge an innovation on the same premise. Companies should not be throwing money at a start-up; it should evolve on its own (Huon, 2013).

Other topics mentioned in connection with required conditions for using customer knowledge in the innovation process were the size of the company on one hand and its relationship with customers on the other. Lewis claimed the smaller the better as small companies are better equipped to innovate faster as the channels of communication are more efficient (Lewis, 2013). Kornum, however, stated that bigger companies with vast pools of resources are better in allocating part of net earnings to the R&D department, especially in high-tech companies (Kornum 2013). In relation to netnography and social media, Tusché and Kornum discussed the importance of organizations maintaining good relationships

with their customers in order to stay innovative and welcoming their knowledge and expertise to help in the process of innovation.

4.5. Discussion and Reflections

The knowledge gained from the interviews generally confirms what the literature presented in the paper proposes, though it provided a deeper understanding of the practical issues that need to be addressed. Several assumptions can be drawn from the interviews regarding the employment of customer knowledge from the platforms in the innovation process.

Firstly, the knowledge gained from neuromarketing seems to be most relevant for product or position innovations, whereas it does not seem to have much input in neither process innovations nor paradigm. This is because the customer knowledge that can be attained with neuromarketing is mostly tacit knowledge about customers' preferences of the attributes of a product, as well as the placement and communication between a company and its customers. It can be assumed to be more relevant for incremental innovations where the product already exists, as it can be used to tweak or enhance the product to create more value for the customers. Accordingly the customer knowledge gained from neuromarketing does not seem to be of the sort that can provide insight into future needs or trends, new technological knowledge or other sorts of knowledge that can be valuable for radical breakthrough innovations. The customer knowledge gained from neuromarketing can thus primarily be used in the later stages of the innovation process, where focus is on the innovation's design.

Secondly, the customer knowledge that can be attained from social media can not only be knowledge about the customers, but also knowledge from customers. This platform provides an opportunity to interact with customers and the customer knowledge gained can be very broad. It can be knowledge about present consumption, needs and preferences, but it can also provide insight into future customer needs. Thus, the social media platform can provide customer knowledge that can be useful for radical innovations as well as incremental ones. It can also be assumed from the research that the broad knowledge base available through the social media platform can be utilized for the whole spectrum of the innovation space; product, process, placement and paradigm innovations. The experts acknowledged the importance of customer knowledge through the whole innovation process. The

interactive construction of the social media platform provides precisely the opportunity for companies to include the customer in the innovation process and thus use the customer knowledge therefrom through the whole process.

Thirdly, the netnography platform seems provide very similar potential as the social media platform. However, it is not an interactive platform, but instead provides a broader scope of customer knowledge. Rather than interacting with the customers, the platform concerns the knowledge that can be attained by analyzing customers' online activities. Knowledge gained through this platform is extensive and the role of the researcher is comprehensive. Knowing what to look for and diagnosing it correctly seems to be crucial. The research suggests that customer knowledge attained through netnography, like social media, can be used for the whole innovation space, for all degrees of novelty. The netnography expert also confirmed that using customer knowledge from netnography can prove valuable through the whole innovation process.

The experts affirmed that the participatory method, in which customers are treated as experts and jointly create innovations with companies, can be used with the social media and netnography platforms. Also, that emphatic design, the technique in which researchers observe customers in their own environment as they use the company's product or service can be used online and that this method can give companies valuable customer knowledge. The research seems to support that using the other processes mentioned in the literature - co-designing, using artifacts or prototypes, the lead user approach, toolkits for ideas competitions, and the community based innovation method - is an effective way of gathering customer knowledge through the platforms. Concerning the selection processes for customer knowledge the experts all emphasized the importance of the researcher. The prior tacit and explicit knowledge residing in the company before using the platforms as a source of knowledge creation will be detrimental to the outcome.

The research suggests that organizations today must be flexible in nature and structure. They have to align their strategy from the top-down as well as bottom-up in supporting and empowering employees, and most importantly they have to be open to new ideas whether they are coming from inside or outside the company. For companies to be innovative, it seems to be very important to involve the entire company, making the innovative mindset a part of the organizational culture, seeing that innovations

can originate from every function of the company. The main challenge for companies in using the customer communication platforms appears to be the vast amount of data that is generated through the platforms, especially through social media and netnography, and manage it for innovation purposes efficiently. The research suggests that after companies integrate the platforms as sources of customer knowledge into their innovation strategy, processes and management, they need to make changes in processes and procedures. The innovation team needs to include key facilitators who understand and know the data attained from the platforms and can actually interpret the data into knowledge and make use of it. The team should consist of diverse people with different backgrounds as the knowledge base will be broader and more creative interactions can take place. The development of integrating customer knowledge into organization's innovation efforts is a learning process.

The knowledge gained from the research indicates that the social media and netnography platforms provide similar knowledge and require similar processes and conditions. This is very much in line with what the literature review proposed. The neuromarketing platform is different in its essence. The framework presented in the literature view is supported by the research. We noted that the experts had clear recommendations about where in the innovation process the knowledge gained from the platforms can be of use, the degree of novelty of the innovations that the platforms are suited for, and which types of innovations the customer knowledge can be of most use. Our assessment is that this information should be a part of our framework and thus it has evolved from the research findings. The new version of the framework is depicted below.

SOURCES OF CUSTOMER KNOWLEDGE	NEUROMARKETING	SOCIAL MEDIA	NETNOGRAPHY
CATEGORIES OF CUSTOMER KNOWLEDGE	Tacit, Know-what	Explicit and tacit Know-what Know-why Know-how Know-who	Tacit and Explicit Know-what Know-why Know-how Know-who
CUSTOMER KNOWLEDGE PROCESSES	*Generation:* Artifacts & Prototypes *Selection:* Experts, Consulting Companies	*Generation:* Participatory Method, Emphatic Design, Co-Design, Lead User Approach, Techniques for Ideas Competition, Community based innovation method *Selection:* Experts, Consulting Companies, Analytical Models	*Generation:* Participatory Method, Emphatic, Lead User Approach, Community based innovation method *Selection:* Experts, Consulting Companies, Analytical Models
CONDITIONS FOR CUSTOMER KNOWLEDGE MANAGEMENT	Flexibility and uncomplicated Structure Innovation and knowledge facilitator Knowledge vision and shared beliefs Effective leadership	Flexibility and uncomplicated Structure Innovation and knowledge facilitator Knowledge vision and shared beliefs Effective leadership	Flexibility and uncomplicated Structure Innovation and knowledge facilitator Knowledge vision and shared beliefs Effective leadership
DEGREE OF NOVELTY, INNOVATION SPACE AND PLACE IN THE INNOVATION PROCESS	Mainly for incremental, product or placement innovations, in later stages of the innovation process	Can be used for incremental and radical innovations, for the entire innovation space and used throughout the entire innovation process	Can be used for incremental and radical innovations, for the entire innovation space and used throughout the entire innovation process

Figure 11: The theoretical framework adjusted after interviews with experts

5. CASE STUDIES OF CASE COMPANIES

The following sections are divided into three main chapters as the research was focused on three different case companies. Firstly, the case of Carlsberg, the fast-moving consumer-goods company in the brewery business with brands worldwide; secondly, the case of Coop, the consumer goods retail company operating grocery stores all over Denmark; and thirdly, the case of Go Dream, a newly established company in the experience industry. Each chapter starts with a brief introduction of the company in question, in order to introduce some background information about their business, industry and market position. Then the main findings of the interviews are presented and discussed in relation to the literature on the one hand and the findings of the experts' interviews on the other. This is done with the aim of relating the previous findings (of the literature and the case studies of experts) to a more practical, experience based view of the platforms. How the platforms are actually being used today in each industry and what are the possibilities, opportunities and challenges for each industry in adapting proactive customer knowledge absorption through the platforms for innovation purposes.

5.1. Carlsberg

Carlsberg was founded in Copenhagen in 1847 where the headquarters remain today. Since its establishment Carlsberg has grown extensively and is now the fourth largest brewery in the world. Their main market and strongest position is in Western Europe, Eastern Europe and Asia. The Carlsberg Group has more than 40.000 employees worldwide in 150 markets, producing more than 500 beer brands (Carlsberg Group, 2013a).

Carlsberg has a clear strategy regarding their operations and growth, which revolves around their long-term aim of being the fastest growing global brewer. In 2012 Carlsberg updated the Group's strategy, gave it a sharper focus, making it more action-oriented, in order to manage the challenges and opportunities that have arisen from market developments. Carlsberg's strategy is depicted as a wheel (see appendix VI) with five interconnected core areas of strategy where Carlsberg's strategic motto: "Thirst for great" is placed in the center (Carlsberg Group, 2013b). The core of the strategic areas of focus is that the growth must focus on creating value in a responsible manner for shareholders,

consumers, customers, employees and the societies in which Carlsberg operates. Although each strategic area and each market they operate in is different, it is stated in Carlsberg's annual that it's important to link the areas together and have the same overall focus and strategy to excel in local and international markets. In the ambition to drive growth, innovations remain a key priority and all innovations are evaluated from a consumer perspective. "At the end of the day, how we develop our innovations, the way we manage our brands and engage in dialogue with consumers is what sets us apart from competitors and enables us to win in the markets where we operate" (Carlsberg Group Annual Report, 2012, p. 25). By understanding what consumers prefer, current trends and customer insights, Carlsberg aims to identify which innovations will get consumers excited and deliver top and bottom line growth over time. In addition Carlsberg's innovations must be scalable and usable across the Group (Carlsberg Group, 2013c).

We interviewed three key employees at Carlsberg in order to gain insight into how the company and the management team views customer knowledge in regards to their innovation efforts and if and how they use the three platforms in the process. As mentioned in Chapter Two of this paper (Methodology), the employees we talked to were Gonzalo Viera, Director of International Insights at Carlsberg Group, Finn Wulff, Marketing Innovation Director at Carlsberg Denmark and Håkon Langen, Senior Packaging Innovation Manager at Carlsberg Breweries.

5.1.1. Customers as Gatekeepers

The first topics of discussion were the characteristics of an innovative company. The Marketing Innovation Director (Appendix VII), from here on referred to as the MI-Director, mentioned that culture is an important factor as companies should make innovation everybody's daily talk, i.e. "everybody should have attention and focus on innovation" (Wulff, 2013). The MI-Director, further adds that innovation can be a new product, new ideas or focusing on doing things differently. To the Senior Packaging Innovation Manager (Appendix VII), from here on referred to as the SPI-Manager an innovative company is a company that dares to take the risks for the unknown and is not afraid of some failures. The company also has to have the resources and see the ROI of the innovation. Just like the MI-Director, he also mentions the corporate culture, explaining that a fast and innovative culture increases productivity of new ideas. The director of international insights (Appendix VII) from here on

referred to as the InI-Director, was in agreement with the SPI-Manager and the MI-Director, saying that the corporate culture is extremely important and can define an innovative company.

Asked whether Carlsberg is an innovative company, both the MI-Director and the SPI-Manager agreed that Carlsberg is not innovative enough. The MI-Director explained that this has become a challenge for Carlsberg. His position as an MI-Manager can be demanding, as his team has to push hard for new products and new ideas to get through the selection gates. He also said that it is a big effort to remind people to be innovative in their thinking. New ideas can easily get crushed or as he put it: "new ideas are often in the beginning fragile, small chickens easily being crushed if you don't take good care of them so we really need to nurse these new ideas up to a certain level where people can see that there is an idea" (Wulff, 2013). The process of generating a new idea and seeing it go the whole way is difficult as there are many stages and challenges in getting the ideas through all levels of the hierarchy. The SPI-Manager discussed a similarly difficult situation in relation to Carlsberg's size and industry. He indicated that it should not be more difficult for Carlsberg to be innovative as they have the available resources but yet its size can act as a barrier. Carlsberg is an established company, which has optimized and improved every function of the company so far, for many years; it is difficult to come up with something new that competes on the same level as current products. He explained that nobody will pay double the price for a soda just because it's new, so the innovations have to compete on the same grounds as the current product selection. In this manner, the industry that Carlsberg operates in differs from other industries, e.g. electronics or jewelry, where novelties are usually more expensive than older assortments (Appendix VII).

The next topic was customer knowledge in the innovation process. All three interviewees were in agreement that customer knowledge is extremely important for innovation (Appendix VII). The MI-Director said that in Carlsberg's case the customers are the gatekeepers, as it is very important to know your customers and their future needs. There should be at minimum 80% knowledge of what the customers want and at maximum 20% guessing involved. Knowledge gained from consumers is important throughout the whole innovation process. According to the MI-Director, companies need to have several touch points with consumers. In the beginning you should be able to understand consumers really well to be able to anticipate what could be a future consumption need. The MI-Director further explains the process: "…and then put new concepts together and build new ideas,

picking up trends, picking up what consumers are doing, thinking, drinking and whatever they do. Later on you start from consumer insight to build new ideas, new future ideas, and then you need to check again with consumers, are we on the right track yet, do you see anything new and interesting in this. Then later on again when the idea is even more crystallized you need to touch base on consumers again and then when launching you need to be in contact with consumers to understand is the launch proceeding okay, are we catching up with consumers as we intended to do? It is a process linked several times into consumer insights" (Wulff, 2013). The SPI-Manager claimed that Carlsberg is in general a customer-focused company, i.e. Carlsberg is much more focused on consumers, consumer insights, brand values, how they are linked and testing basic insights than focused on concept testing. The most important thing is the consumer (Appendix VII).

Related to customer knowledge, the MI-Director expanded on how Carlsberg manages knowledge internally for innovation purposes. Carlsberg has several sources to generate insights, e.g. ongoing tracking on consumers, what they think and feel about Carlsberg's brands, and how they react to them - some sort of measurement on how the brands are performing in consumers' minds. Carlsberg also pays attention to ongoing trends and does some deep diving to see whether something interesting is going on e.g. health trends. All this knowledge that is gained through these different sources is managed by a unit, an inside team, and their job is to act as a central point for insights. Every time someone in the company, e.g. from the sales, marketing or innovation teams, needs an insight, they touch base with this team to build a strategy.

5.1.2. An Elephant Attempting to Adapt

Starting with neuromarketing, the SPI-Manager and the MI-Director were not aware that Carlsberg is using neuromarketing to gather customer knowledge. The InI-Director however mentioned that Carlsberg uses what he called neuro-diagnostics, and can be considered the same as neuromarketing. Neuro-diagnostics is a method that Carlsberg uses to gather outside knowledge, as the InI-Director pointed out that Carlsberg "needs to understand why the space of need is" (Viera, 2013) i.e. what is missing. The method is about wiring people to sensors while they are presented with some stimuli. The InI-Director explained further: "we present them with a stimulus and they just see the stimulus and they don't need to talk about the stimulus because their brain talks to us, so it's a very transparent

methodology. We understand from measuring the brainwaves that these people understand the concept and how they react to the concept. This is one methodology and it has been very successful" (Viera, 2013). The InI-Director named a couple of methods within neuromarketing, e.g. facial recognitions and eye-tracking exercises. Furthermore, he claimed that Carlsberg uses the information gathered from neuro-diagnostics for innovation purposes.

The InI-Director gave an example of how Carlsberg undertook their latest communication campaign. First people were connected to a sensor and told a story, a narrative. The consumers, the participants of this research, were told to close their eyes and imaging they were at a party, they were having fun, etc. The results of this research were very helpful, "by understanding the results of this research we understood that out of five ideas there were two that really connected to our audience and that were meaningful, because the participants were connecting not only the product with the idea presented, but also to themselves" (Viera, 2013). After the research Carlsberg was able to design a solution that ultimately connected their products with feelings of joy and fun. As a result they had good point of sale material to display; material that corresponded to the results of the study and connected to customers that buy the product.

Although the MI-Director and the SPI-Manager were not aware of neuromarketing being used at Carlsberg as mentioned above, they were convinced that neuromarketing could be of benefit to Carlsberg's innovation efforts. The SPI-Manager mentioned especially that neuromarketing could help prove or disprove some hypothesis that he has come across as a packing manager. We saw neuromarketing as a tool that could confirm some assumptions that he believes are important: "color, shapes, tactility, temperature and all these things would be nice to sort of measure and see the importance of the different ones so we can actually focus on the ones that are important" (Langen, 2013). Coincidently Carlsberg is currently exploring how they can do a packaging attributes study on all the different parameters to gather insights on how important the different parts are.

The MI-Director explained that he finds neuromarketing interesting because he believes it could provide information and insights that can't be gathered by directly asking consumers. He further added that Carlsberg might be a little too conservative to try neuromarketing at the moment. The process of getting new ideas through each stage of acceptance is a long process with many decision-makers

involved. He believes it would be hard to convince someone to take an idea further based on neuromarketing results.

Regarding the social media platform, Carlsberg mainly uses Facebook. The MI-director mentioned that Carlsberg Denmark has to comply with some restrictions regarding the legal drinking age that affect their Facebook activities, but yet they are beginning to increasingly make use of social media. He claimed that they have a lot to learn with regard to how to use social media in the most efficient and effective way. Presently around 80% of their Facebook activities are just about being there and only 20% is about communication with consumers, being active and doing promotions and competitions. Today Carlsberg Denmark uses Facebook mainly for marketing purposes, but the MI-Director disclosed that Facebook does have some overseen potential. Carlsberg has a lot of committed customers who gladly would want to be involved in contributing to developing new products and Facebook can be an ideal venue for that.

Both the SPI-Manager and the InI-Director mentioned that Carlsberg has a great technical team that oversees their Facebook activities. This team can make complicated algorithms that analyze information from Facebook. They categorize users by relevance and demographic information and as a result Carlsberg can target their audience better and communicate more effectively. The InI-Director further emphasized that it is important to make sure that Carlsberg does not lose touch with consumers and doesn't miss the opportunity of understanding their needs: "understanding customers is a never ending story" (Viera, 2013). Additionally, he claimed that social media generates both tacit and explicit knowledge. In general, Carlsberg has never had any difficulties getting consumers to participate in various activities.

Netnography is something that Carlsberg occasionally uses. The InI-Director explained how Carlsberg has used this method to gain insights; in process of going from idea creation to concept creation, and then from concept creation to product creation, netnography proved useful. He illustrated with an example: Carlsberg was working on a new product and needed some help from consumers to improve it. Netnography was used to understand how consumers would react to one idea by opening a blog and monitoring the traffic there and what people were commenting on, in order to understand their individual positions. Eventually the insights were used to further enhance and improve the new product. The SPI-Manager thought that netnography could benefit Carlsberg later in the innovation

process as well, especially when launching products, to understand the feedback from consumers in a test market. It would be a learning process for other markets.

Although it seems clear from the research what it takes for a company to be innovative, it appears to be difficult in a large consumer-goods company. A mature company with a complex hierarchy and established products, cash cows that generate most of the earnings, seems to have a hard time implementing new knowledge into the development processes of those products. The entire management of knowledge needs to be strengthened between divisions in order to further exploit knowledge and methodology that is present within the walls of the organizations. The fact that neither the PI-Manager nor the SPI-Manager were aware of neuromarketing being used for gathering consumer insights is a good indicator of the need for better management of knowledge.

A company with broad product lines and many brands rarely takes the chance to change key features to enhance their business. It can be said that established products are more fragile than new products as they can be very price sensitive, as the customer is not willing to pay double the price for the product and customers seem to like the product as they have been buying them for a long time. Also, companies want to keep their cash cows to continue with business as usual. The economy today has gone through a lot of changes in relation to customers, as technology advancement and globalization creates more informed and more demanding customers who want to participate more in the development process. Large production companies need to follow today's developments by renewing their offerings in order to conserve and increase their current customer base. Regardless of company size, there is no reason not to use innovation as a creative driver of cost reduction, service improvement and revenue growth. As costumers are the gatekeepers, as being buyers of products and services, companies should make use of knowledge generated from customers even if it means altering some of their offerings. All three platforms can be relevant for fast-moving-consumer-goods-companies, both for radical innovation as well as for incremental innovation, just as Carlsberg uses all three platforms for gathering knowledge. Davenport et al (2006) claim that the drive to innovative is now more than ever crucial for corporate success as the accelerated knowledge sharing and turbulent corporate environment forces companies to constantly reinvent and adapt. The research suggests that in a large company it can be beneficial to have a central team that attains customer insights and manages it in a way that every function of the company has access to it. The insights team at Carlsberg, where every insight is collected and stored

for future usage, exemplifies this. The flexibility of allowing new ideas, i.e. outside knowledge to enter the operation of the company will increase further the creativity of coming up with new products and services. Although communication channels are complex in nature when the company is large, the central archive of insights could make communication less difficult and the flow of information easier and operate more smoothly. Large established companies can even go a step further and empower small innovation teams, which are interdisciplinary cross divisions and create an environment where experimentation is considered as a learning process than can thus be transferred between divisions. As described by the SECI model, knowledge generated from customers should flow constantly through an organization and needs to be managed accordingly for easy access. Carlsberg has the means and resources to be innovative and thus continue their leadership in the brewery market. It is apparent that the bigger a company is, the more focus is on efficiency, scalability and low-cost production. That being said, innovation does not necessarily mean radical changes that are industry changing innovations but innovation can also mean those small improvements or add-ons to current markets that are all about creating new value for customers.

Neuromarketing technology can benefit this industry when incremental changes are made. Essentially innovation is a human skill but neuromarketing can contribute to knowledge gained from customers for further enhancement - the incremental changes that a product needs to target another audience or keep current audience. This knowledge has the potential of inspiring innovations that consumers will have stronger emotional connection towards. The small differences will make a product stand out more and be more competitive. Carlsberg uses neuromarketing techniques mostly for position innovations by gathering knowledge on how the company can communicate better and more efficiently with customers. They could perhaps also use the platform for later stages of product innovations, as the stimulus that is shown to the consumer can be of various types, all depending on what is being researched and for what purpose.

The social media platform is a great way to communicate with customers about their emotions and opinions towards a product or service. The most popular application seems to be Facebook. Carlsberg could use Facebook more for innovation purposes, to gather knowledge from customers for enhancements and improvements of their current selection or to gain insight into unfulfilled needs. With the well-known brands that large production companies often own, there should not be any

trouble getting customers to share their knowledge. To make use of knowledge gathered from social media efficiently, Carlsberg employs a team of technical experts that can program an application of categorization of customers to make it easier to follow and understand. With easy access to consumers, the possibilities are endless regarding co-creating value with customers directly. Von Hippel (1977) confirmed long time ago that listening to your customers can help the process of innovation. Technology today offers large organizations the opportunity to portray their image according to the values of customers, which is precisely what moves consumers today e.g. customer's hobbies and lifestyles.

Netnography is a great platform for fast-moving-consumer-goods companies to monitor their customers, find a niche that is missing in the current customer base, e.g. find a missing factor that the customers are asking for, define how customers perceive the products or services etc. This platform can be used for either radical or incremental innovations. The insights recorded through netnography can be used in all stages of the innovation process as well as provide a learning opportunity for the company when launching products in new and foreign markets. As the Internet offers observations globally, companies can make use of netnography to monitor non-customers and to find a undiscovered need, e.g. analyzing how different attributes of an existing product can be improved to match each culture.

5.2. Coop

Coop's history dates back to 1866 when the first cooperative store was established in Denmark. Coop Denmark is a leading retailer that employs around 35.000 people and operates about 1,200 supermarkets and discount stores around Denmark under several brands e.g. Kvickly, Dagli´Brugsen, Irma, Fakta and SuperBrugsen (Coop, 2013a). The industry Coop operates in, the consumer goods retail industry, has been experiencing difficulties for the last few years as consumers are increasingly becoming more economical and price sensitive, while the competition gets tougher. In the last few years Coop has therefore experienced tough times financially, that is since the financial crises hit in 2008; 2012 being the worst yet. This has had the effect that Coop has closed many smaller stores and laid-off one-sixth of the employees at their headquarters (Coop Annual Report, 2012). In spite of this, Coop has managed to increase their market share in the Danish grocery market seven years in a row and remains focused on improvement and rapid adjustment to changes in the market. They place

emphasis on social responsibility and have introduced a couple of novelties in that field, e.g. their Savannah brand, which provides African originated products to Denmark (Coop Annual Report, 2012).

We interviewed the Head of Strategy Implementation at Coop, Christian Skøtt Maltesen (from her on referred to as the SI-Director) who provided us with insights into how Coop uses customer knowledge in their innovation efforts. He explained how they use social media for gaining customer knowledge but admitted that they neither use netnography nor neuromarketing. He did see a lot of opportunities for Coop to improve their customer knowledge accumulation and expressed interest in these platforms as an alternative.

5.2.1. Management Involvement and Interpretation

The SI-Director began by expressing his opinion on what makes a company innovative. He felt that two characteristics are crucial; firstly, the ability to balance the management of radical innovations at the same time as managing rapid continuous improvements; and secondly, the ability to pursue innovations from different sources. In that respect he explained that some ideas will come from asking customers, others from observing customers, while yet others will come from transforming ideas within the industry. All in all, the management of adapting quickly, observing the change and learning from it, then building the next innovation on top of that, thus building continuous learning into the organization. This should result in innovation becoming a core capability, making it a part of the organization to the point where it becomes embedded in the organizational culture and in the way people work.

The SI-Director further reflected on the conditions that in his opinion must be in place in order to make use of customer knowledge. First of all, he stressed the importance of managerial understanding; the vitality that management acknowledges and understands the importance of customer knowledge, i.e. the fact that customers do have something to offer. He stated that in the retail sector everybody is at some point a customer, and as the employees of the company or its management are themselves customers, it can make them blind towards the need to listen to other customers and be open-minded about what people are actually saying. Secondly, he conveyed that companies must have the capabilities to capture and understand what the customers are saying. Retail companies receive a lot of aggregated data from customers, but the data needs to be turned into information or knowledge. He

illustrated this with an example of the company having data suggesting so and so many customers had a bad shopping experience – though it contains the main complaint, it does not explain what was wrong with the experience, e.g. were the floors dirty or were the employees rude? Understanding the data is vital as it is the only way the store can act on it and thereby actually serve a purpose. The final condition the SI-Director mentioned is to ingrain customer knowledge into managerial behavior, so that it is used at every single meeting and that every decision about how Coop delivers its offerings is focused on what the customers want. This means going back frequently and verifying that Coop is delivering what the customers actually want, rather than just what they say they want. He gave an example to clarify this: instead of asking customers "how long do you want the queue to be?" he would rather ask "how long are you prepared to wait?" It becomes a question of tradeoff. Ultimately you know more about the customer and the customers are more aware of themselves.

When asked whether customer knowledge is important in the innovation process, the SI-Director replied that it becomes extremely important to know whom you are speaking to and outline that person's segmentation model. By identifying your segment and figuring out what they want, you can find a valuable customer that can actually identify something that can be improved. Additionally you will get more information about the customers, what sorts of attitudes do they have, demographic elements, and so on, and Coop can address some of those needs and use it as an inspiration for their innovation efforts. Coop often finds that customers have quite a difficult time articulating their hidden need. It becomes extremely important to listen to and understand the customers' real needs and to be able to dissect that knowledge. The SI-Director gave an example of some customers wanting to have an inspiring shopping experience, and when that is dissected further it could for example mean that the customers want to be surprised in some way, provided with good offers on special products, have offerings of local produce, etc. Being able to determine what the customer actually means is very important. Quite often it is really simple to deliver this inspiring shopping experience if you begin by looking closer based on a particular insight. He recommended building a hierarchy of customer needs, focusing on attributes at the top of the hierarchy that deliver value to customer segments that are most important to the business. There is no need to overcomplicate the supply; there needs to be focus.

The SI-Director said that Coop typically uses customer knowledge in the beginning of the innovation process. He added that they are not very good at following up and continually refining and developing

ideas further. He explained that after they launch an innovation, they are not sufficiently diligent in updating the customer knowledge the company has, following up and developing the innovation alongside the market as time passes. What is hot today might not be hot in a year or so. He illustrated this with an example about their weekly advertising brochures. The most common way for a Danish retailer to communicate with their customer is, according to the head of strategy implementation, through these brochures. After Coop has spent considerable money on developing their weekly brochure so that it is in line with what customers have deemed important, his main concern is that it will not be followed up on and that what is important today will be immaterial in weeks or months. Senior management plays a big role here. In his opinion, it should be them who spend the most time with customers; talking to customers and figuring how to improve their entire company's ecosystem and add more value for the customers.

5.2.2. Overcoming Challenges with Customer Involvement

The SI-Director stated that he believes Coop could benefit from using neuromarketing techniques to gather insights about customers. However they are not yet using it. He gave an example of where he believes neuromarketing could provide valuable customer knowledge: "when we talk to customers they really like to have something of an ecologically freshly grown produce, but when it comes to reality prices are the only thing that matters" (Maltesen, 2013). To be able to look deeper into customers' tacit needs and dissect and analyze whether prices are actually the only thing that matter or what are the customers truly asking for. He sees neuromarketing as a chance to get more inspired to further enhance their offerings. When the SI-Director was asked what would have to be in place so that Coop would take advantage of neuromarketing, he replied that they would probably have to have a clear example from another industry that has used neuromarketing successfully or, even better, an example within the retail industry. Another concern of his is the ability to provide evidence that neuromarketing can prove better than the more traditional research methods in detecting insights. His last comment on neuromarketing is the ethical part of it. Responsibility and ethical behavior is in Coop's DNA so it would be very important for them to be able to claim that using neuromarketing on their customers is not a way to manipulate their customers in any way. He believes that Coop is really poor at managing communication and this is the reason Coop could never become first-movers in neuromarketing.

Moving on to social media, Facebook is Coop's primary social media platform today. Each store has a separate page and the main purpose of using Facebook is to promote their offerings, create awareness, test some ideas and allow customers to express their feelings and frustrations, in order to establish an understanding between the customers and the stores. The best recent example of this that the SI-Director mentioned is the promotion of reduced waste in their stores. If a store offered for example ten bananas for 20 kr. and there are eleven bananas together in a bunch, people would pick one banana out of the bunch. That one banana would almost never be sold and eventually be thrown out. In this example, their Facebook page promoted a responsible behavior towards waste. Coop used Facebook to build competitions around how to eliminate this problem, which proved successful. Thus, social media is a way of reaching their customers with some of their key messages as well as a source of solutions to their problems. The SI-Director claimed that Coop actively uses social media to get their customers involved in the innovation process. He said that Coop has used social media to get their customer to vote on ideas or to propose new ideas to improve environmental issues regarding the stores.

The process of gathering the knowledge gained from social media usually consists of Coop building some kind of application that gathers the data and then hiring a consulting company that will do the analysis for them. The consulting company then provides Coop with a simple analysis, one that summarizes the data into relevant information. In terms of knowledge management, the SI-Director admits, as stated earlier, that Coop is not very good at communication. They could benefit from improving the process of distributing the knowledge gained through social media, but in most cases the information is privileged and as such the customer knowledge will not reach all employees. Yet they try to spread as much of the general insights gained as widely within the company as possible. He further added that managing the knowledge better and allowing customer knowledge to gain a wider circulation throughout the company could create a lot opportunities for them.

The SI-Director was not aware of Coop actively and effectively using netnography, but did mention that Coop monitors customers' behavior and responses on their websites but that is only limited to that.

Asked whether Coop co-creates with the customer, the SI-Director discussed a virtual format that Coop operates, which they call local supporting, to communicate with customers that make their purchases in the smaller stores. Stores that have a turnover of less than 10 million kr., which is very small compared

to other stores. This platform includes the customers in the process of designing the stores, allowing them to co-create with Coop in designing the stores' product range, etc.

The SI-Director pointed out that simply taking advantage of new technology and using the three customer communication platforms does not by itself mean that you are innovative. For a company to be truly innovative the customer knowledge has to reach all levels of their development processes, their follow ups and cultural aspects. In his view, Coop is not as innovative as it used to be, but compared to other Danish retailers they are relatively innovative.

Coop's definition of an innovative company revealed the need to balance both radical and incremental innovation. Retail companies interact with customers daily thus companies can get a lot of inspiration from customers to innovate. As this industry is very competitive it is important to observe changes, adapt quickly and eventually learn how to respond to those changes radically or incrementally. It seems to be a problem in the retail industry that companies don't listen sufficiently to customers. They are treated as repeated customers that necessarily have to come every day to shop for necessities like groceries. Even though the complaints aren't complicated in nature, the tendency to not respond to suggestions seems to be problematic. Retail companies need to acknowledge that customers do have something to offer and involve end-users to create the value that customers strive for. Customer knowledge is important, as it is to listen to the customers and try to dissect the issues and focus on the problem at hand. The managerial understanding of the importance of understanding customers is crucial and managers need to open their minds to the rich opportunities in customer input. The manager can act as a facilitator of managing the knowledge generated from customers, and to dissect the knowledge gathered. Retail companies seem to receive a lot of aggregated information from customers that requires further interpretation, to be transformed into actual knowledge. The platforms can offer both explicit and tacit knowledge to understand customers better, which is essential in this industry as it is in others. Each platform as a source of knowledge can offer this industry different solutions to further innovate, anywhere in the innovation space or to whichever degree of novelty. The research suggests that customer knowledge is mostly used in the beginning of the innovation process but needs to be exploited throughout the whole process. However, Coop does not quite follow up on their innovations, as they should – the market evolves quickly and the platforms could generate knowledge about the

customers' feelings and opinions towards that particular innovation. Ultimately, customer knowledge is relevant at all stages of the innovation process.

The neuromarketing platform would be of great use for the retail industry as customers can have a hard time articulating what their needs are. Although customers say that they want to have some special type of a product, e.g. organic, the numbers indicate that the purchase almost always comes down to the price factor. Neuromarketing could test this hypothesis to figure out what is true, what is the customer's true feeling towards the product - what are the customers truly asking for, what are their tacit needs that they cannot put into words. In addition, neuromarketing could provide inspiration for some future enhancements of the current products or services, which is all part of the learning process.

Social media is beginning to be an essential element for retail companies today as it is an excellent platform for communication and interactions with customers. Facebook is apparently the most popular one where the purpose is to promote what the companies have to offer and to test some ideas to see how customers react. The process of interacting with customers provides an opportunity to gather knowledge from them. With Coop's method, customers are encouraged to participate in discussions regarding some idea or product, often through managing competitions around the ideation and getting customers to vote between two ideas or getting them to propose new ideas. They also seem to do what Kornum (2013) indicated to be important, i.e. they engage customers by appealing to their interests or values. In order to use the gathered knowledge efficiently, it must be properly managed. The distribution of the knowledge throughout the company is crucial so that it can be as effective as possible. By implementing communication procedures that all managers recognize could create a lot of opportunities for the company.

Netnography could benefit retail companies greatly because customers are always expressing some feelings towards retail offerings, brands and companies. For example grocery stores could monitor blogs or other online media to understand needs their customers have that are unfulfilled. As Coop tries to involve customers that shop at smaller stores into the innovation process, e.g. co-designing the product selection with them, they could take it a step further by creating a virtual platform or social media application to see how the customers would design their own stores and in the meantime Coop could monitor the actions taken on this virtual platform to use to their advantage. They could also take this further and use this knowledge in other areas as well, e.g. in the bigger stores.

5.3. Go Dream

Go Dream was founded in 2007 and as such is a very young company still experiencing the early growth phase of its life cycle. Not only is the company young but the offerings they provide, i.e. the gift cards for a variety of different experiences, are relatively new as well. Although the essential experience, e.g. driving a Ferrari or riding an air-balloon has been available to consumers for a long time, the possibility of buying a gift card which the consumer can redeem, having a choice between hundreds of different experiences, is the clever innovation behind the company's business model[2]. The company is based in Copenhagen and employs around 30 people. Its offerings are available in Denmark, Norway and Sweden.

The company's ambition is to make people's dreams come true. Go Dream's motto - "to experience is to live" - goes hand in hand with their reputation as a young, modern, different and innovative organization where anything is possible. Their modernity can for example be witnessed by their visibility on, and active use of, social media; on their homepage you can easily find links to their Facebook, YouTube, LinkedIn and Instagram sites.

Their standpoint is that experiences are much more valuable for human beings than just receiving material things like a new television, and therefore it makes the perfect gift (Go Dream, 2013a). This is also the essence of the experience industry, i.e. what separates it from the other industries; it is in fact the fourth economic field (commodities, goods and services being the first three), offering economic value that is added to a product (or service) or are in fact the product (or service) itself (Christensen, 2009). Go Dream also offers businesses a variety of experience packages for employees, the chance to cooperate with other companies and to participate in networking solutions (Go Dream, 2013b).

As mentioned in the Methodology chapter of the paper, we interviewed the Marketing Director of Go Dream, Kristijan Thorstensen.

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[2] Go Dream is however not the first company in Denmark in the field; SmartBox was founded in 2000 and Bellavue in 2003.

5.3.1. Customers are the Key

The Marketing Director began the interview with explaining what he believes are the characteristics of an innovative company. To him, an innovative company is characterized by structure and processes that are not too settled and established. Go Dream tries to hire a diverse group of people to get different and assorted collection of ideas. Another example of how Go Dream diversifies their sources of innovations is their collaboration with all kinds of partners, stakeholders, customers and business-to-business customers, therefore gaining a lot of external knowledge. When the Marketing Director was asked whether he thinks customer knowledge is important in the innovation process, he replied "extremely important" for all kinds of innovations; radical or incremental innovations. Customers are the key for Go Dream's existence thus customer knowledge is the key for everything. For the experience industry customer knowledge is the most relevant type of knowledge for product development. He claimed that this is especially true for Go Dream's business-to-business customers, e.g. Tivoli, as they possess a lot of knowledge regarding the experience industry. Go Dream really tries to take advantage of that and learn something to further increase their offerings.

5.3.2. Humanistic Approach and Inspiring Interactions

Netnography is something that Go Dream uses every day according to the Marketing Director. They mainly use Google Analytics to monitor everything on their websites, e.g. in terms of traffic and reaction to Go Dreams propositions. Every now and then they design tests online to research customer preferences. From the Google Analytics tool Go Dream receives reports on consumers' online activities, and based on predefined goals these are evaluated regularly, as well as on an ad-hoc basis, to improve shopping experiences for customers.

Go Dream gets inspired from customers through social media. From various social media platforms Go Dream can establish which experience category is increasing in popularity and from there decide their next strategic move. Facebook is Go Dream's main social media platform. The Marketing Director disclosed that in the near future Go Dream plans increase their online interactions with end-users; they want to make Facebook more integrated with their website where end-users can share their experiences through the platform. Every year about 30.000 people receive their products as gifts. With each gift, Go Dream intends to include a voucher with the experience certificate, one that directs people to a mobile

application (or their Facebook page) and will allow them to share their experiences of Go Dreams offerings, and have the possibility to win some prizes. They are already trying to get people to share experiences and ideas by having competitions on Facebook and some ideas have surfaced, although these have not been used for innovation purposes. The purpose for these actions is that Go Dream wants more customer-to-customer interactions on their sites, as it provides a good source of customer knowledge.

The Marketing Director stated that Go Dream is not at the place yet where neuromarketing could prove valuable. He explained that the company is relatively young and is growing so fast every year, (200-300% growth each year), that they hardly keep up as it is. The Marketing Director further added that in his opinion it would be more settled and established companies that could benefit from neuromarketing, especially for further enhancement of products. At the moment Go Dream is focusing on increasing the number of locations where their product is sold, which is going well for them as they have gone from 600 stores in Denmark to over 3.200 stores in just two years.

Another source of outside knowledge that the Marketing Director mentioned are persons that possess some sort of expert knowledge in one particular field, e.g. skating or parachute jumping, that Go Dream calls ambassadors. These ambassadors help Go Dream innovate within their field. Sometimes these ambassadors are lead users within their category of expertise and as such provide information on common future needs in that field. Though it might seem that Go Dream would sponsor these ambassadors for marketing purposes, the Marketing Director explains that marketing is only about 10% of what they get out of it; the rest is "real knowledge, relevant information about what is going on" (Thorstensen, 2013) and further explained that this knowledge helps them innovate.

In order to take advantage of customer knowledge from outside sources, the Marketing Director acknowledged a few conditions that he believes should be in place. Firstly, management has to be aware of how customers can create value for the business. Secondly, they need to be able to measure what that particular knowledge is creating. All knowledge that companies gather needs to be systematically organized and structured the right way. He further reflected that the interactions that take place online with customers are different from face-to-face interactions, and he believes face-to-face interactions are of higher quality whereas online interactions are higher in quantity. However, the Marketing Director acknowledged that companies can also have interactions of high quality with the

customer online and illustrates this with an example: Go Dream received a solution to a certain problem from customers online regarding customers having bad experiences when buying coffee at some coffeehouses that are in cooperation with Go Dream. Instead of excluding some cafés from the experience product offering, Go Dream successfully managed the problem by listening to customers commenting online and fixing the problem. Furthermore, he explains that face-to-face and online interactions are equal in importance because both methods create value for the customer.

The Marketing Director clarified that he believes customer tacit knowledge or hidden needs can be transferred through the Internet. He explained this by providing an example from the sportswear company Puma, where they designed a new line of clothing targeting people who don't really exercise but like to wear the company's branded clothing as street-wear. Puma came up with a successful campaign that was called: "The after hour athlete" targeting people who don't use their clothing for exercise. This was a result of insights from their target audience, gathered from online sources. He added that the information available online does not create anything if you take the creative, brilliant employee out of the equation, "I don't think that insights will just deliver the answers without interpretation" stressing the important role the interpreter has on developing an idea further. The human factor is always needed in the innovation process though these tools are also relevant in the process as being sources of customer knowledge.

The case company in the experience industry is operating in a relatively young industry that has been growing rapidly over the last years. The research showed that for a company to be innovative in this industry, flexible structures and processes are crucial. Given that the industry is young and developing quickly, the company Go Dream is using both traditional management tool as well as evolving communication paradigms. The company takes advantage of its whole ecosystem, i.e. all stakeholders, partners, customers - business-to-business customers in particular, in its innovation activities. To increase creativity, Go Dream tries to employ diverse people and implement outside knowledge. As before, customer knowledge is extremely important in the innovation process for all kinds of innovation. It is important to acknowledge the value of the knowledge customers bring, as they are the key for companies to continuously develop and learn, in order to be able to provide customers with desirable future offerings.

As neuromarketing is an expensive tool for companies to take advantage of, Go Dream expresses that they are not there yet; the more traditional methods still work because this industry is still relatively young and growing fast. Although neuromarketing could be a useful technique, there does not seem to be a need for it in the case of Go Dream as they are in the beginning of their life cycle, growing rapidly and producing good profit. The main reason seems to be that launching an innovation is not expensive in their industry as there is little research and development cost, etc., meaning that if an offering fails, there is no big loss and they can move on to try another. Also, designing an offering can be done by simply talking to their customers.

From social media, companies in the experience industry can gain knowledge about the next big thing. By communicating with customers and analyzing where the next wave will be, they can design their offering accordingly. As companies are cooperating more, business-to-business communications are also common on social media applications. One technique to get end-users to share content with the company on Facebook for example is to organize competitions. That way they can get customers to share their experiences online and eventually share some thoughts regarding the product for further enhancements. It could benefit companies to get customers to comment on a social media site and learn from them. Another suggestion would be to locate some experts in certain areas of interest, e.g. ambassadors as Go Dream calls them, and gain knowledge from them by communicating with them online.

Netnography can be used for all kinds of knowledge gathering. Go Dream uses Google Analytics to monitor their customers – where they come from and other pertinent customer data. All knowledge that is gathered from observing customers online is relevant for further considerations in the innovation process; whether it is knowledge about the customer, e.g. demographic features or knowledge from the customer e.g. some new experience suggestions. This platform is very relevant in this industry as experiences can be designed from desires described by customers on the Internet, as online feedback can be very descriptive and sometimes reveal factors that they might not reveal in person. It can also provide insights into how to improve the current products available.

5.4. Discussion and Reflections

The aim of this part of the research, the case companies, was to show how three different Danish companies view customer knowledge in regards to innovation and knowledge management, and in particular how the three communication platforms can act as sources of customer knowledge. A further goal was to compare the companies' attitudes towards utilization of the platforms and reflect on different approaches gathering customer knowledge. The companies are different in nature as they operate in different industries, are of different sizes, two are relatively old businesses while one is new; they follow different strategies, values, and so on. Although the importance of customer knowledge seems relevant for every industry and each company, as all three case companies agreed upon, it varies which platform is currently being used and which platform is most desirable for attaining customer knowledge. However, though the companies are different in nature they can provide implications for each other to assist in gathering customer knowledge and manage it for innovation purposes.

It seems to be difficult for large companies like Coop and Carlsberg to implement an innovative mindset among employees, among other reasons because of their complex hierarchy. To increase the creativity and encourage innovation, these companies could employ diverse personnel that work together in an interdisciplinary way, much like Go Dream does.

The platforms are relatively new in practice in relation to innovation, so it becomes important for organizations to learn from experience and practice. An interesting aspect of this is that the processes of attaining customer knowledge will constantly be evolving, which leads to companies needing to adapt to a continuous learning process and agility. While the platforms are gaining recognition and experience, the literature and the research suggest using some more traditional methods to compare and combine with the sources that the platforms provide. It thus becomes important for companies to categorize their customers by relevance, knowledge and status. Every organization, despite the industry it operates in, should categorize their customers for relevance and further enhancement of understanding the customers. The literature suggests that companies have to sort out the appropriate customers to pay attention to (e.g. lead-users and trendsetters), and this is exactly what the informants of our research stressed. What is more, as argued earlier in the paper, the informants agreed that knowing the "typical" customer still remains important and modern Internet and communication technology provides access to knowledge about and from the mass, a quantitative approach towards

customer knowledge. This is exactly what Coop needs to implement into their innovation efforts. Coop should put together a central team that works closely with managers to archive insights gathered from customers. Through practice the managers would learn to understand customers and dissect the issues collected from customers.

In regards to the neuromarketing platform, categorizing which customers to study is more related to demographic attributes, but social media and netnography offer more complex variables that have to be taken into consideration. Facebook seems to be the most recognized and used social media application for companies to utilize for their online activities. Facebook is categorized in the high self-presentation/self-disclosure group and low to medium social presence/media richness group, which make the user more transparent to the company, i.e. more personal information is provided and users seem to become intimate in their relationship with a particular company. It can be extremely helpful for innovation to involve customers more in the process. Giving their company awareness, Carlsberg and Coop can really take advantage of customer loyalty and customers' willingness to participate and share their thoughts and feelings to improve the company's offerings. Go Dream should embrace and build a valuable customer base that is loyal and willing to help in the process of innovation, which they are trying to do. Moreover, take it a step further and motivating customer-to-customer communications online. With netnography, there seems to be a clear need to categorize customers, non-customers and online-users since the online world is vast. Coop would gain extensively from observing customers online. By gathering explicit knowledge from customers, their frustrations and compliments, retail companies would acquire firsthand knowledge about customers' preferences.

6. DISCUSSIONS, IMPLICATIONS AND CONCLUSION

In this final chapter of the paper, we discuss the findings of the research, i.e. the theoretical and practical implications. The chapter is divided into three sections. First, the paper is reviewed with regard to answering the main research question and four sub-questions to conclude the purpose of this study. Secondly, a managerial framework is presented that allows managers and executives to efficiently and effectively exploit the platforms for their innovation efforts. The framework has evolved through the paper and takes into account the literature review and the research findings. Suggestions and recommendations are provided as well as an illustration to further explain the process of using the platforms as sources of customer knowledge. Lastly, the conclusion summarizes the findings from the research as well acknowledging the limitations of the research and presenting suggestions for future research.

6.1. Findings

The main research question seeks to identify how companies can capture customer knowledge with the help of the three customer communication platforms, neuromarketing, social media and netnography, and furthermore manage it for innovation purposes. To be able to identify how companies can capture customer knowledge, the sub-questions help to further explain the processes that companies have to consider to make use of customer knowledge attained by the platforms.

The world is changing; organizations, customers and resources are changing. The theoretical implications from the paper consider these aspects as drivers behind customer knowledge management in relation to how it benefits corporate innovation. Although knowledge management has been recognized by organizations as a strategically important asset, and its management as a key resource has been researched since the early '90s, it might not be enough for sustaining a competitive advantage in today's volatile market. In order to maintain a competitive advantage, organizations need to be able to constantly renew themselves and stay on their toes towards stakeholders, e.g. customers and competitors. Alongside Internet and technology advancements, customers are also changing - they have gone from being passive buyers to active opinion contributors demanding more customized offerings that provide some value to them. Consequently the value is the reason that customers choose one

offering over another. Since customers have begun to share their opinions online among their peers, and it may no longer be sufficient for organizations to seek innovation and inspiration on an internal basis, the online world can offer an additional pool of knowledge. Organizations must increasingly look outside their own boundaries for further knowledge in order to stay competitive. It can be argued that those drivers, as mentioned above, are the basis for customer knowledge management for the benefit of corporate innovation.

Customer knowledge management is related to knowledge management as it consists of management techniques for organizations to identify, create, distribute and enable the adoption of insights and experiences internally as well as externally. In order to make use of customer knowledge generated from the three platforms, the framework we have developed describes the main aspects, i.e. the type of knowledge, processes and organizational conditions that have to be included in the management of customer knowledge where the sourced by the platforms.

The capture of customer knowledge through the platforms offers organizations countless opportunities to further enhance their offerings, renew and innovate. The platforms are different in nature and offer different possibilities for companies to exploit them for outside knowledge, neuromarketing specifically differing from the other two. Since neuromarketing is an expensive process, more established companies, where small tweaks can significantly improve a product or service, could utilize it for product or position innovation later in the innovation process. The two online platforms can be of use through the whole innovations process for all kinds and varieties of innovations. All three platforms offer valuable knowledge that is extremely important for corporate innovation and can further serve as an inspiration for ideation and concept creation for companies. Customer knowledge management becomes extremely important for the successful implementation and commercialization of an innovation, an essential part of the innovation management process. In the process of selecting and identifying a possible market and target audience, the platforms can also be of use seeing that customers are the key for corporate success. The implications of the findings are further explained in the managerial framework in the next chapter.

6.2. Managerial Framework

The purpose of this framework is to present the research findings for successful utilization of the platforms in practice and ongoing management for innovation. The framework has developed throughout the paper, and is based on the literature available, the expert interviews as well as the multiple case study from three industries. Previous chapters discussed each aspect of the knowledge management perspective towards innovation in detail and provided some insights in the form of suggestions and recommendations. Figure 12 below presents a summary of the main objectives, key processes for each foundation as well as the comparatively best outcome of each process.

Foundations	Main Objectives and Key Processes		Outcome
Customer Knowledge Management	∞ Managerial understanding and recognition of the need to generate outside knowledge ∞ Implement customer knowledge into the entire innovation process ∞ Categorization of customers ∞ Knowledge creation	∞ Flexibility and uncomplicated organizational structure ∞ Innovation and knowledge facilitator in a central function ∞ Implement a knowledge vision and shared beliefs towards innovation ∞ Effective leadership	∞ Sustainable organization ∞ Inspiration for ideation ∞ Competitive advantage ∞ Enable renewal ∞ Relevant knowledge ∞ New markets ∞ Stronger relationships with customers
Neuromarketing	∞ Attaining tacit customer knowledge for innovation management	∞ Generation: Artifacts & Prototypes ∞ Selection: Experts, Consulting Companies	∞ Incremental innovations for large, established firms ∞ Product and position innovations
Social Media	∞ Attaining explicit and tacit knowledge for innovation management	∞ Generation: Participatory Method, Emphatic Design, Co-Design, Lead User Approach, Techniques for Ideas Competition, Community based innovation method ∞ Selection: Experts, Consulting Companies, Analytical Models	∞ Radical and incremental innovations ∞ Product, process, position and paradigm innovations
Netnography	∞ Attaining explicit and tacit knowledge for innovation management	∞ Generation: Participatory Method, Emphatic, Lead User Approach, Community based innovation method ∞ Selection: Experts, Consulting Companies, Analytical Models	∞ Radical and incremental innovations ∞ Product, process, position and paradigm innovations
The Value Contribution	∞ The customer is the primary concern throughout the whole innovation process	∞ Include customer knowledge in the entire innovation process	∞ Successful innovations and continuous rejuvenation producing higher returns

Figure 12: The managerial framework

Customer Knowledge Management: The first step to utilize the platforms for innovation purposes is to recognize the need to search outside the traditional boundaries of the organization for knowledge. Innovations appear to becoming more complex in nature and companies increasingly recognize that internal knowledge is not always enough for their innovation activities and search for knowledge externally. The essence of any organization is its customers. Today customers are more demanding and informed about offerings and they want to participate or contribute in the advancement of products and services available. Customer knowledge is thus extremely important for the innovation process, and the three customer communication platforms can provide this knowledge.

Something every organization should strive for is either making the competition irrelevant or gaining competitive advantage – the ability to outperform the competition. An organization can manage this as soon as it discovers how to efficiently and effectively create, distribute and utilize new (internal and external) knowledge throughout the organization, and attach it to organizational processes. Customer knowledge management can give insights into how the company can improve its offering and act as a source of inspiration for new products and services. In order for organizations to survive and stay competitive in this unstable and volatile business environment they need to continuously improve, develop and implement innovations; in today's market environment innovation must be a key part of an organization's operations.

In the interpretation of customer knowledge there are notable differences. On the one hand, knowledge *from* customers refers to knowledge the customers possess, in particular their own expertise and capabilities to co-create with organizations. On the other hand, there is knowledge *about* customers that is for the purpose of understanding the customers and their needs and wants. Another important factor is to be able to categorize customers and sort out appropriate customers to pay attention to in each case. When managing innovation, companies can choose from a pool of customers that possesses the knowledge that is needed for each scenario. It can either be based on the customers' expertise, their interest or their abilities that could contribute to the further advancement of an idea.

Managers also have to recognize that knowledge is a valuable organizational resource, i.e. the knowledge residing within the organization, and it is a key driver for success. Thus there is a need to understand how customer knowledge gained through the platforms can create new organizational

knowledge. The SECI model centers upon the spiraling process of knowledge creation that takes place within the organization. The first mode of the model, socialization, represents how the tacit knowledge gained from customers through the platforms, e.g. when customers' values and preferences are interpreted from their social media activities, is transferred to become an employee's tacit knowledge about the customers. The research suggests that this type of knowledge creation is highly relevant for innovation. Tacit knowledge is very meaningful for innovation as companies try to fulfill every need of the customer, whether the need is tacit or not. The whole interpretation depends on the researcher or company employee, as his or her tacit knowledge will help with recognizing and evaluating a particular need. The second mode in the SECI model is combination. With social media applications and netnography, companies gain knowledge that is explicit from the customers and by combining that knowledge with their own existing explicit knowledge they can create new knowledge. The customers' explicit knowledge can further contribute to enhancing ideas that can become successful innovations, by rearranging, re-constructing and adding to previous knowledge within the organization. The third feature of the model is internalization, which can be compared to a traditional organizational learning process. As the platforms are relatively new and their contribution to the innovation process has not gained a great deal of experience, organizational learning is a crucial part of the knowledge creation process. Managers and organizations gain experience and practical training while using the platforms and the some of the knowledge gained becomes tacit knowledge of the employee. The forth mode is externalization, which covers the tacit knowledge that is transferred into explicit knowledge by communication and explanation. When companies (or their employees) interact with customers through the virtual platforms of social media, they can in some cases gather tacit knowledge about their customers, e.g. their values, feelings and opinions by reading between the lines, analyzing not only what the customers explicitly write but also what is not written. This tacit knowledge can sometimes be turned into explicit knowledge by the employee. The same applies for netnography, although there are no direct interactions between the company and the customers; the employees analyze not only what customers explicitly write on the Internet but also what they chose not to write about, what they don't show interest in or by analyzing the online profiles of their customers. However, neuromarketing technology and processes directly transfer tacit customer knowledge, mostly knowledge about customers, into explicit knowledge. Therefore it can be reasoned that neuromarketing in itself is a form of externalization.

The SECI model is exceptional for explaining the knowledge creation that happens when customer knowledge is gathered through the platforms and combined with the previous knowledge of a firm. It can be useful for managers to understand this knowledge creation process in order to grasp the importance of outside knowledge for the innovation purposes. Implementation of the knowledge gained from customers through the platforms will demand on actions taken by the company in order to coordinate the flow of knowledge, select the right knowledge, explore the innovation space, etc. This is some of the work necessary to efficiently uncover opportunities to innovate and effectively fulfill the advised prerequisites and conditions for utilizing the platforms.

Neuromarketing can generate tacit customer knowledge, as customers' preferences and unconscious needs can be revealed through this platform. The research suggests that this platform can contribute to incremental innovations, product or position innovations, where a product already exists but is going through considerations regarding design or communication campaigns for position innovation, for example engaging consumers by provoking positive feelings. The research also suggests that this platform is most beneficial to large established companies in a stage of slower growth. With neuromarketing, managers can test hypotheses regarding previous research and gain more support for their theories of customer preferences, before further actions are taken. Furthermore, in the later stages of the innovation process, neuromarketing can be used when the focus is on the design of a product. Helpful tools for generating knowledge from customers through neuromarketing are artifacts or prototypes where the customer is given an object, which is used to represent a product that is being produced. Knowledge about customers' attention, engagement or emotions can be studied while the customer is using that object. It is recommended to seek expertise, as neuromarketing can be a difficult task to perform and requires extensive knowledge from the researcher for interpreting the results.

Social media applications are gaining a lot of attention today as most companies use them to interact with customers and create awareness. The knowledge gained from social media can be both explicit and tacit; customers reveal their explicit knowledge through what they write, and unconsciously reveal tacit knowledge by what they don't engage in, although it depends highly on the interpretation of the researcher or employee. Social media can present knowledge about the customer as well as knowledge from the customer, and thus the knowledge gained is very broad and can not only reveal current consumption but also indicate future needs. Knowledge gained from this platform can be useful for

both radical and incremental innovations through the entire innovation process, from start to finish. Whether it is product, position, process or paradigm innovations, social media can generate knowledge to apply in the innovation process. If a company wants to include customers in its innovation efforts, social media is the exemplary platform to utilize. There are a number of useful tools available to encourage customers to share their thoughts and feelings. The tools that are suggested are: the participatory method where end-users are treated as experts and companies co-create offerings that will benefit the end-users, emphatic design where customers are observed using the offering and companies try to pinpoint a hidden need, co-design, lead user approach, idea competition and the community based innovation method involving customers being treated as resources for ideas. It is recommended to establish a team of experts within the company to fully comprehend the customer knowledge and take advantage of the analytical models available.

Netnography is similar to the social media platform although it does not concern interactions with the customers. It offers managers a broad range of knowledge from customers and non-customers online. Internet users are constantly searching, blogging, sharing and discussing matters that could be of use to a company's innovation processes. As the knowledge gained from netnography is extensive, it offers information about both explicit and tacit needs of customers. It is suggested to use netnography for both radical and incremental innovations, the entire spectrum of the innovation space, and can be used through all stages of the innovation process. Since the online world is vast, it is crucial to know what you are looking for and be able to select the correct knowledge thus know how that particular knowledge contributes to the company's strategy. The interpretation of the data depends highly on the researcher, and to eliminate any misinterpretation or researcher bias it is recommended that at least two researcher work together on each netnography project. The tools that are available to help search for the correct type of knowledge are: participatory method, emphatic design, lead user approach and community based method. It is recommended to include experts when using netnography to analyze the behavior of customers as well as the analytical tools available.

The Value Contribution: The customer is a primary concern; the essence of a successful innovation is the value it delivers to the customer and this value is the reason that customers choose one product over others. A product can have endless features but unless these features provide value for someone that is willing to pay for them, the product will fail. Managers must realize that their assumptions and believes

have to be adjusted to the customers' assumptions and believes. Customers are always co-producers of a product or service, as the value is not delivered until the consumption takes place, and they must be recognized as individuals with custom needs. If this notion does not comply with some of the company's products, there is always a chance to divide the company up and operate more than one business models; i.e. use the conventional approach to manage established products and use a collaborative value approach for innovation efforts. The economy is changing as customers are becoming more demanding as the selection of various offerings is increasing. Furthermore, the role of the customer is changing and managers need to recognize the need to be unique and comply to customer needs.

6.3. Conclusion

This paper presents three customer communication platforms that can be used for attaining customer knowledge for innovation purposes. The platforms are relatively new, especially in connection to innovation. In recent years, the importance of customer knowledge has become clearer as the need for companies to take advantage of outside knowledge to further enhance their offerings and their renewal has become crucial for their survival. Customer knowledge management is fundamentally about identifying, creating and enabling the adoption of knowledge attained from customers and distributing that knowledge throughout the organization for further utilization. The paper identified a number of drivers and techniques for organizations to collect knowledge from and about customers for innovation purposes.

The overall theme of the paper concerns the three customer communication platforms of neuromarketing, social media and netnography. The research showed how valuable the knowledge gained from the platforms is as a source for outside knowledge. The platforms are deemed to be relevant for attaining knowledge for incremental as well as radical innovations. Neuromarketing provides customer knowledge that is ideal for usage in the later stages of the innovation process, especially for large established companies facing fierce competition, as it provides tacit knowledge that can be helpful for designing the attributes of a product. Social media and netnography provide tacit and explicit knowledge from and about customers that can be relevant at all stages of the innovation process. The knowledge gained through social media and netnography offer a holistic approach

towards customers as it can provide knowledge about the masses as well as a specific target group. The implementation and capture of value plays a role in innovation management. In order to be innovative, organizations have to make innovation their priority and adopt it as a core business process. The essence of an innovation is the value it contributes to the customer; it is the reason that customers prefer one offering to another. The customer communication platforms can serve as a great source of customer knowledge.

6.3.1. Limitations of the Study and Further Research

There are a few limitations that need to be considered in regards to the results of the study. Firstly, in an explorative study like this one, time is a limiting factor. In order to research the link between the three platforms and innovation and generalize their applicability in a broader context, the link should be studied over longer periods of time, perhaps years. One would need to immerse into the company to wholly understand the detailed processes and contributions of each platform. Only after such scrutiny and time span can a concrete conclusion be drawn about the success of innovations resulting from the customer knowledge attained from the platforms. Secondly, generalizing the findings of a single study is inadvisable and thus further research is needed. Thirdly, although we aimed to stay completely objective, the results may be influenced by our inherent perspectives and mindsets as students of Strategic Market Creation. Finally, as neuromarketing is not actively used by all the case companies the results of the neuromarketing part of the case studies are partly based on assumptions of the interviewees.

The relative novelty of the platforms implies the need for further research on the issues proposed. The chance to fully explore the dimensions of customer knowledge generation and further study the link between the platforms and innovation is called for. Also, the possibility to combine a quantitative study measuring the success of innovations resulting from customer knowledge gained through the platforms, together with a qualitative study like this one would be interesting. A research where all case companies are presently using all three platforms for innovation purposes would be ideal.

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9. APPENDICES

9.1. Appendix I: The Experts' Profiles

David Lewis is a neuropsychologist who has been called the 'father of neuromarketing' for his pioneering studies (started in the late 1980's) of analyzing brain activity for research and commercial purposes. He is the founder, Chairman and Director of Research of the Mindlab International, a company specializing in neuromarketing studies; brain research and neuroscience as applied to consumer behavior and decision-making; based at the University of Sussex. He has published a variety of books on the subject, held lectures, released DVDs, and appeared as an expert on a BBC documentary about neuromarketing (Lewis, 2013). He thus has extensive experience in neuromarketing and brought valuable knowledge to our research about the relationship between neuromarketing and innovation. We got in touch with Dr. Lewis's assistant, by phone, and requested an interview. The interview was approximately an hour long and as he lives in the UK it was conducted by phone.

Nayeli Tusché studied cognitive psychology at the University of Maastricht in the Netherlands and specialized in the stimulation of creative and innovative ideas within groups and individuals. She also holds a degree in consumer science from the Technical University of Munich as well as a Master's Degree in Sustainability Marketing and Open Innovation Processes. She has been working with netnography at Hyve since 2009, a German consulting company that specializes in investigating customer requirements using the lead user method, creativity and netnography as a procedure of online community research (Hyve AG, 2013). She provided us with extensive knowledge of how she uses netnography for innovation purposes and reflected on the potentials the platform has for companies in their innovation processes. The interview was approximately an hour long, and as she is based in Germany it was conducted by phone.

Trent Huon holds a degree in Optometry as well as an MBA from St. Gallen in Switzerland. He is Australian but has been based in Germany for seven years. He worked in West Africa for several years as an optometrist before becoming a management consultant for a Monitor, a company in the health industry, and then becoming a business designer at Ideo. Ideo is an award-winning international

innovation and design company that helps organizations to innovate and grow. Their strategy is to identify new ways to serve and support people by uncovering latent needs, behaviors, and desires and they do this by taking a human-centric, design approach to innovation (Ideo, 2013). Huon has been with Ideo for almost three years and had a lot to contribute to our research, particularly concerning the relationship between customer knowledge and innovation as well as general insights into the innovation process. The interview was conducted by Skype and lasted roughly 45 minutes.

Hannah Zenk is a Design Researcher at Ideo. Her focus is to understand human behavior, to uncover emerging needs, comprehend the present and inspire what is to come (Zenk, 2013). Her role at Ideo is to represent the perspective of the customer continuously in the innovation process, adapt the customer perspective iteratively in line with customer feedback, with the intent of designing innovations that create value for customers and success for companies (Zenk, 2013). She has been with Ideo for almost two years but has worked as a Research Designer for five years for other smaller start-up companies. She holds a Master's Degree in Design from the Zurich University of the Arts. We interviewed her and Vannessa Monogioudis together, via Google Hangout, and the interview lasted approximately 45 minutes.

Vanessa Monogioudis is a Design Researcher and Project Lead at Ideo. She has been with Ideo for over five years and specializes on the human factors of the innovation process. She holds a Master's Degree in Psychology from the University of Graz. Her contribution to our research was intertwined with that of Ms. Zenk's as we interviewed them together and they provided similar insights.

Niels Kornum is an Associate Professor and has been teaching social media and online communities at Copenhagen Business School since 2004 (Kornum, 2013). His research focuses on multi-stakeholder analysis and as such online processes, online communities and social networks play an important role in his research perspective (Copenhagen Business School, 2013). We interviewed him with the objective of gathering insights into how the social media platform can facilitate in the innovation process. The interview was roughly an hour long and was conducted face-to-face.

9.2. Appendix II: The Profiles of Interviewees at the three Case Companies

Carslberg: We interviewed three key employees of Carlsberg. Gonzalo Viera, the Director of International Insights at Carlsberg Group, who has been working for fast-moving-consumer-goods companies for the last fourteen years in Latin America and Europe. He has held various positions within marketing, e.g. market research, marketing strategy and strategic planning. His position at Carlsberg requires him to focus not only on the data from market research but more importantly how to translate that data into useful information for the company; translate knowledge about customers and from customers into valuable insights.

Finn Wulff, Marketing Innovation Director at Carlsberg Denmark, focuses on driving product innovation process within Carlsberg Denmark, new launches and commercially important new products in cooperation with the global organizational strategy (Wulff, 2013).

Håkon Langen, Senior Packaging Innovation Manager at Carlsberg Breweries holds a Master's Degree in Environmental Engineering and has been working for Carlsberg for nine years. His focus is on innovating in collaboration with suppliers, inventors and internal departments; developing new and exciting packaging for Carlsberg's products, some of which may be new product development or redesign, working from idea generation, concept development, technical development, implementation to launch.

Coop: We interviewed Christian Skøtt Maltesen; the Head of Strategy Implementation at Coop. Mr. Maltesen holds a Bachelor's Degree in Commerce, Economics and Marketing from the University of Sydney, and an MBA from the Australian Graduate School of Management. He has over 17 years of professional experience, consisting of management consulting, strategy formulation and implementation, development and implementation of new commercial concepts and business improvements. At Coop he leads business transformation efforts across the group, focusing on structural improvements within operating units (Maltesen, 2013).

Go Dream: We interviewed Kristijan Thorstensen, Marketing Director of Go Dream and external lecturer at CBS. Mr. Thorstensen holds a Master's degree from CBS in Designing Communication

Management and has over 10 years professional experience, which includes working with marketing strategy, positioning, consumer insights and concept development.

9.3. Appendix III: Interview Guide

INTERVIEW GUIDE

CARLSBERG

1. Opening:

Greetings and thanks for meeting us. Ask permission to tape the interview and mention that we'll be taking notes. Present our roles.

2. Purpose and Provide Info:

Explain the purpose of the meeting:

3. The Interview: Information Gathering:

General Background

1. What is your background and role in the company?

2. What would you say characterizes an innovative company?
   - (Its marketing? And/or its strategy? And/or its culture? And/or working processes?)
   - Would you consider Carlsberg to fit that description? Please elaborate?
   - Could you give some examples of innovations (product, process, packaging, brand, etc. innovations) that Carlsberg has launched recently and is focused on at the present?

3. How important do you consider customer knowledge in the innovation process?
   - Please elaborate… *(Make sure to get insights about type of knowledge and about what and when in the innovation process different types of knowledge is important and why)*

4. How does Carlsberg manage knowledge that is of importance in the innovation processes internally?
   - Special department for knowledge management?
   - Defined KM processes?

Neuromarketing

1. Are you familiar with neuromarketing?
   - What is your view of neuromarketing?

2. Has the company used neuromarketing?
   - *If yes then questions 2-5:*
   - If no then questions 6-8 :

3. Which techniques does the company use for neuromarketing? (Instruments, tools)
    - How are the subjects chosen?
    - Can you give a detailed account of the process?

4. What kind of customer knowledge does the company gain from using neuromarketing? (Tacit / explicit - know what, how, who, why?)

5. What does the company do with this knowledge?
    - How is it shared throughout and within the company?
    - How is it managed?
    - What needs to be in place in order for this knowledge to be of use? (conditions)

6. Has this knowledge (to your knowledge) lead to innovations or co-creations with the customer?
    - How?
    - What kind of innovations? (Incremental/radical, 4 p's)

7. Do you believe neuromarketing could be an effective method for gathering customer knowledge? Why/why not?
    - Which advantages do you think customer knowledge gathered from neuromarketing could have in relation to innovation? (and disadvantages)

8. What kind of customer knowledge do you think the company could gain from using neuromarketing? (Tacit / explicit - know what, how, who, why?)

9. What would the company do with this knowledge?
    - How would it be shared throughout and within the company?
    - How would it managed?
    - What do you believe would need to be in place in order for this knowledge to be of use? (conditions)

Social media

1. Which social media platforms does the company use?
    - How does the company use these social media platforms?
    - Does the company follow a specific strategy for the management of its social media sites?
    - Is there a specific employee/department that manages the company's social media sites?
    - Can you give a detailed account of the process?
    - Do you categorize the users of our social media pages (lead-users, trendsetters, etc.)?
    - How willing do you think customers are to share knowledge through social media?

2. What kind of customer knowledge does the company gain from using social media? Tacit/Explicit? Know what, how, who, why? Knowledge about the customer or from the customer (expert knowledge?)

3. What does the company do with this knowledge?
    - How is it shared throughout the company?

- How is it managed?
- What needs to be in place in order for this knowledge to be of use?

10. Has this knowledge lead to innovations or co-creations with the customer?
    - How?
    - What kind of innovations? (Incremental/radical, 4 p's)

4. Which co-creation techniques has the company used? (Show list of techniques and acknowledge that it is not an exhaustive list)

Netnography

The method, netnography, offers researchers and organizations the chance to observe Internet activities of various people and record their insight and needs. The word netnography is coined from the qualitative research method ethnography and the Internet or technology networking.

1. Does the company use netnography in a structured manner?
   If yes then questions 2-5:
   If no then questions 6-7:

2. – How does the company use netnography?
   - Can you give a detailed account of the process?
   - Do you categorize users online or follow specific users?

3. What kind of customer knowledge does the company gain from using netnography the company could gain from using netnography?
   (Tacit/Explicit? Know what, how, who, why? Knowledge about the customer or from the customer (expert knowledge?)

4. What does the company do with this knowledge?
   - How is it shared within the company?
   - How is it managed?
   - What needs to be in place in order for this knowledge to be of use?

5. Has this knowledge lead to innovations or co-creations with the customer?
   - How?
   - What kind of innovations? (Incremental/radical, 4 p's)

6. What kind of customer knowledge do you think netnography could provide for the company?
   (Tacit/Explicit? Know what, how, who, why? Knowledge about the customer or from the customer (expert knowledge?)
   - Are there organized Carlsberg communities online?

7. What would the company do with this knowledge?
   - How would it be shared within the company?

- How would it managed?
- What would need to be in place in order for this knowledge to be of use?

Customer Knowledge from all three platforms

1. Does customer knowledge attained from these platforms contribute to competitive advantage? Economic gain? How?

2. How do the interactions through these platforms differ from face-to-face interactions?
   - What are the main benefits of using virtual interactions with your customers?
   - How important are these virtual interactions with customers for the innovation process?
   - Do you believe these interactions will become more/less/same important with time?

4. Do you presume that tacit customer knowledge can be transmitted through these three customer communication platforms to the form of tacit employee knowledge (tacit to tacit knowledge)?

5. Do you think knowledge gained through the three platforms (neuromarketing, social media and / or netnography) could reveal customer's hidden needs? (needs they are not aware of) –if yes, please elaborate.

6. Do you think innovative companies (ref. to the definition you gave previously) are more prone to using the three platforms for knowledge creation and innovation efforts?

4. Closing:

Thank the interviewee for their time, and their input. Also be sure to ask for permission to follow up if needed.

Post Interview

Review notes and expand them as needed. Transcribe and analyze.

9.4. Appendix IV: Example of the Literature Index

Authors	Year	Title	Topic
Esterhuizen, Schutte, du Toit	2012	A knowledge management framework to grow innovation capability maturity	Innovation is a prerequisite for being competitive. KM plays a fundamental role in innovation. The article's objective is to develop a KM framework that enables innovation capability.
Asgarian	2012	Knowledge management capacity and innovation performance	The paper studies the relationship between KM capacity (KMC) and innovation performance (IP). KMC includes k-sharing, k-application and k-acquisition. IP indicators include administrative-I, product-I, and process-I.
Madhoushi, Sadati, Delavari, Mehdivand, Mihandost	2011	Entrepreneurial Orientation and Innovation Performance: The Mediating Role of Knowledge Management	The study relates the role of KM to entrepreneurial orientation and innovation performance. The results of the study show that KM acts as a mediator between entrepreneurial orientation and innovation performance.
Cantner, Joel, Schmidt	2011	The effects of knowledge management on innovative success – an empirical analysis of German firms	The paper analyzes the effects of KM on the innovation success of firms in Germany. The results show that firms that apply KM perform better in terms of higher than average shares of turnover with innovative products compared to their twins.
Su, Chen, Sha	2007	Managing product and customer knowledge in innovative new product development	Knowledge creation is a spiral process of interaction between explicit knowledge and tacit knowledge so as to enhance companies' competitive advantage in innovation they must make efforts in KM. Product innovation must link technological competence and customer competences such as customer needs. The paper addresses the demand to study how managing product and customer knowledge enables the conversion of tacit knowledge into codified knowledge for creating value and reducing risk.
Payne, Storbacka, Frow	2008	Managing the co-creation of value	The customer is always a co-creator of value: There is no value until an offering is used – experience and perception are essential to value determination.
Du Plessis	2007	The role of knowledge management in innovation	Innovation is extremely dependent on the availability of knowledge and therefore the complexity created by the explosion of richness and reach of knowledge has to be recognized and managed to ensure successful

			innovation. The article sees to clarify the role of KM in innovation as an aid to addressing this complexity. Also to identify the drivers for application of KM in innovation. Third, it details the nature of the role of KM in innovation & its value proposition.
Carneiro	2000	How does knowledge management influence innovation and competitiveness?	The paper examines the relationships between organizations' competitiveness, innovation advancements, and KM and presents a set of considerations regarding how these relationships affect strategic management and the formulation of competitive strategies.
Swan, Newell, Scarbrough, Hislop	1999	Knowledge management and innovation: networks and networking	The paper points out the importance of providing a network to encourage sharing, the importance of face-to-face interaction for sharing tacit knowledge, active networking among dispersed communities, rather than relying on IT networks. Community based model of KM for interactive innovation.
Cavusgil, Calantone, Zhao	2003	Tacit knowledge transfer and firm innovation capability	Examines the effect of tacit knowledge transfer on firm innovation capability. Relationship between inter-firm relationship strength and tacitness of knowledge transfer, extent of tacit knowledge transfer and innovation capability and innovation capability and innovation performance based on the theory of knowledge.
Nonaka	1994	A dynamic theory of organizational knowledge creation	The paper proposes a paradigm for managing the dynamic aspects of organizational knowledge creating processes. Organizational knowledge is created through a continuous dialogue between tacit and explicit knowledge. New knowledge is developed by individuals but organizations play a critical role in articulating and amplifying that knowledge.
Nonaka, Von Krogh, Voepel	2006	Organizational Knowledge Creation Theory: Evolutionary Paths and Future Advances	The paper reviews different aspects of the organizational knowledge creation theory. Organizational knowledge creation is the process of making available and amplifying knowledge created by individuals as well as crystallizing and connecting it to an organization's knowledge system.
Rahimli	2012	Knowledge Management and Competitive Advantage	To have a sustainable competitive advantage, an organization should realize how to create, distribute and

			utilize knowledge through an organization and how attach it to organizational process. Another important thing is a manager should know what kind of knowledge they should seek to enhance organizational activity to get sustainable competitive advantage. The paper goes through literature review to investigate more the importance of KM in the respect of competitive advantage.
Herrgard, T. H.	2000	Difficulties in diffusion of tacit knowledge in organizations	To manage intangible assets such as knowledge is an important capability for competition. One of the main aspects of KM is to spread the knowledge across and within organizations and to code the knowledge. Tacit knowledge is difficult to codify and therefore cannot be managed as explicit knowledge. It is too risky to rely on personal tacit knowledge alone. The ability to share tacit knowledge offers great value to the organization. The different difficulties are to be found; perception, language, time, value and distance.
Howells, J.	1996	Tacit Knowledge, Innovation and Technology Transfer	Tacit know-how is becoming known for playing a key role in a firm growth and competitiveness. Tacit knowledge is an important element in a firm's knowledge base and outlines the main parameters and traits. Tacit knowledge can be acquired and transferred on a many levels; individual, group, firm and inter-firm basis. Important to look at tacit knowledge in a dynamic setting. On the road to codification, tacit knowledge would at least be able to constitute an organizational routine in structured framework. All firms need to develop a dynamic tacit knowledge regime that renews and updates the tacit know-how skills.
Johnson, Lorenz, Lundvall	2002	Why all this fuss about codified and tacit knowledge?	The authors argue firstly that the discussion on codification must make the fundamental distinction between knowledge about the world (know-what) and knowledge in the form of skills and competence (know-how). Secondly, it is argued that the dichotomy between codifiable and non-codifiable knowledge is problematic since it is rare that a body of knowledge can be completely transformed into codified form without losing some of its original characteristics and

			that most forms of relevant knowledge are mixed in these respects. Thirdly, the authors contest the implicit assumption that codification always represents progress. – The paper is a critical assessment of another paper by Cowan, Foray and David. (Look into).
Gibbert, Leibold, Probst	2002	Five Styles of Customer Knowledge Management, and How Smart Companies Use Them To Create Value	Corporations are beginning to realize that the proverbial 'if we only knew what we know' also includes 'if we only knew what our customers know.' The authors discuss the concept of Customer knowledge Management (CKM), which refers to the management of knowledge from customers, i.e. knowledge resident in customers. CKM is contrasted with knowledge about customers, e.g. customer characteristics and preferences prevalent in previous work on knowledge management and customer relationship management. Five styles of CKM are proposed and practically illustrated by way of corporate examples. Implications are discussed for knowledge management, the resource based view, and strategy process research.
von Krogh, Nonaka, Aben		Making the Most of Your Company's Knowledge: A Strategic Framework	This paper develops a framework of four strategies for managing knowledge. Companies can leverage their knowledge throughout the organization, expand their knowledge further based on existing expertise, appropriate knowledge from partners and other organizations, and develop completely new expertise by probing new technologies or markets. The two core processes of knowledge creation and transfer are central to the execution of these strategies, as is the company's domains of knowledge. The framework is based on conceptualization about knowledge management practices at Unilever, a multinational fast-moving consumer goods company.
Butler	2008	Neuromarketing and the perception of knowledge	The emerging field of neuromarketing reveals that knowledge has plasticity. In other words, different stakeholders, marketing researchers and practitioners, perceive the development and application of neuromarketing knowledge in different ways. Having different perceptions of knowledge is not a new issue, but finding new interconnections between those

			perceptions is beneficial to knowledge creation and diffusion. The research–practice gap in neuromarketing is briefly discussed and then resolved through the contribution of this commentary, the proposal of a novel Neuromarketing Research Model. The Model interconnects basic research reporting, applied research reporting, media reporting and power processes.
Suomala, Palokangas, Leminen, Westerlund, Heinonen, Numminen	2012	Neuromarketing: Understanding Customers' Subconscious Responses to Marketing	This article presents neuromarketing as a way to detect brain activation during customer engagement. Neuromarketing is a field of marketing research that studies consumers' sensorimotor, cognitive, and affective response to marketing stimuli.
Ojanen, Hallikas	2009	Inter-organisational routines and transformation of customer relationships in collaborative innovation	The purpose of the paper is to introduce an approach for increasing understanding of the driving forces and influence of inter-organizational routines in the transformation process towards deeper customer-orientated collaboration in innovation. In practice, the results of the paper aim to promote organizations' balance between exploitation- and exploration-related activities towards more customer-orientated innovation management.
Draghici, Petcu	2011	Knowledge Transfer - The Key to Drive Innovation for Service Organizations Excellence	As service organizations become increasingly aware that knowledge is among their most valuable strategic assets, they will try to develop and maintain the knowledge transfer through the organization and to make the employees understand the importance of knowledge and communication. The paper highlights that advanced information and communication technologies, a dedicated knowledge sharing culture and a strong leadership based on continuous improvement and excellence models such is Lean Six Sigma are essential factors in facilitating knowledge transfer. The Lean Six Sigma approach is necessary because service organizations and their employees need a methodology and a leadership approach for improving and resolving problems, which arise from organizational culture and knowledge transfer.

Kristensson, Matthing, Johansson	2007	Key strategies for the successful involvement of customers in the co-creation of new technology-based services	The aim of the paper is to propose a conceptual framework consisting of research propositions concerning the key strategies required for the successful involvement of customers in the co-creation of new technology-based services. The results of the study provide management with guidelines for organizing successful user involvement projects with a market-oriented approach.
Prahalad,, Ramaswamy, Venkatram	2000	Co-opting Customer Competence	The distinguishing feature of the new marketplace is that consumers become a new source of competence for the corporation. To effectively harness the competence of the consumer, managers must: engage their customers in an active, explicit, and ongoing dialogue; mobilize communities of customers; manage customer diversity; and co-create personalized experiences with customers.
López-Nicolás, Meroño-Cerdán	2011	Strategic knowledge management, innovation and performance	The paper discusses the consequences of knowledge management (KM) strategies on firm's innovation and corporate performance. Organizations are not aware of the real implications that KM may have. Based on an empirical study consisted of 310 Spanish organizations and structural equations modeling, results show that both KM strategies (codification and personalization) impacts on innovation and organizational performance directly and indirectly (through an increase on innovation capability).
Alvesson	2001	Knowledge work: Ambiguity, image and identity	This article critically addresses the significance of knowledge and suggests other candidates for capturing what is really crucial in knowledge-intensive firms. Exploring the consequences of ambiguity for management, client relations, organization and identity. Knowledge is normally treated as a functional resource, something useful on a subject, principles or techniques for dealing with material or social phenomena. Arguments on identity as a key element in doing knowledge work, successful rhetoric, image production and orchestration of social interactions call for the regulation of employee identities.

Swart & Kinnie	2003	Sharing knowledge in knowledge-intensive firms	Which HR policies are best suited to overcome barriers to sharing knowledge. Sharing knowledge between employees is crucial to gain the most from the intellectual capital and to compete competitively. It depends partly on building social capital by focusing on the needs of knowledge workers.
Drucker, P.	2002/originally published 1985	The Discipline of Innovation	Contemplates innovation from inspiration or hard work. If hard work, management plays a crucial role, the right roles and processes; Innovation is real hard work and should be managed as any other corporate function. Except that innovation is the work of knowing rather than doing. Innovation is the specific function of entrepreneurship. In practice it is not about size or age of a firm, but rather to a certain kind of activity. Drucker established seven kinds of opportunity that innovation springs from; unexpected occurrences, incongruities, process needs, industry and market change, demographic changes, changes in perception and lastly new knowledge. Innovation requires knowledge, ingenuity and focus. Purposeful, systematic innovation begins with the analysis of the sources of new opportunities. Depending on the context, sources will have different importance at different timings.
Kozinets	2001	The field behind the screen: using netnography for marketing research in online communities	Netnography (ethnography on the Internet), is a qualitative research methodology that adapt ethnographic research techniques to the study of cultures and communitities emerging through computer-mediated communications. The information from netnography is publicly available in online forums to identify and understand the needs and decisions influences of relevant online consumer groups. It is less time consuming than ethnography. It provides a window into naturally occuring behaviors. The limitations of it, draw from its more narrow focus on online communities , the need for researcher interpretive skills and it is hard to generalize the results to the groups outside the online community sample.

			Various methods are presented. The informations gathered can be sensitive to use e.g. it might lead to embarrassment or exclude of a member for reveal some information (again lead to interpret skills of an employee). This method offers a sort of C2C atmosphere that cannot be drawn from other qualitative methods e.g. focus group or interviews.

9.5. Appendix V: Complete List of Codes

Term	Code
Conditions	CON
Organizational structure	CON-ORG
Level of innovativeness	CON-INNO
Organizational culture	CON-CULT
Size of organization	CON-SIZE
Customer relationship	CON-REL
Top management	CON-TOP
Processes	PRO
Feasibility/relevance/selection	PRO-SEL
Knowledge sharing/transfer	PRO-TRANS
Knowledge creation/SECI	PRO-CRE
Generation of knowledge	PRO-GEN
Sources	SOU
Neuromarketing	SOU-NEURO
Social media	SOU-SM
Netnography	SOU-NET
Categories	CAT
Tacit knowledge	CAT-TAC
Explicit knowledge	CAT-EXP
Know what	CAT-WHAT
Know why	CAT-WHY
Know how	CAT-HOW
Know who	CAT-WHO
Expert interviewee background	EXP-BACK
Case interviewee background	CASE-BACK
Customer knowledge importance	CUST-IMP
Relevance for every industry	REL-IND

Interpretation skills	CON-INTER
Incremental innovation	INC-INN
Radical innovation	RAD-INN
Product innovation	PRO-INN
Position innovation	POS-INN
Process innovation	PROC-INN
Paradigm innovation	PAR-INN

9.6. Appendix VI: Carlsberg's Strategy Wheel

9.7. Appendix VII: Summary of the Interviews

Christian Maltesen

Christian Maltesen began discussing how an innovative company balances both radical and incremental innovation and source innovations from different aspects e.g. from customers and other sources within the industry and actually learn from it. He stressed the importance of managerial understanding that customers do have something to offer and being able to dissect the issues at hand. Customer knowledge is of relevance typically in the beginning of the innovation process although Coop could be better in following up on what the customer has to offer. There is a need for a continuous improvement. Maltesen further reflected that Coop could benefit a lot from neuromarketing and actually understand what customers really want. He would want to see some example of neuromarketing being used so he would know that it has actually proven to provide some valuable insights. He further reflected that the ethical part of neuromarketing would have to be in order at all stages in the company. Facebook is Coop's main social media platform. Each store has its own Facebook page where Coop tries to encourage some responsible behavior and to create awareness. Coop also uses Facebook to involve the customers into their decision-making process regarding new ideas where customers vote on a certain topic. The process of gathering the knowledge gained from social media goes through software where it provides some simple analysis that is distributed throughout the company where it belongs. It is considered to be privileged information. Through the smaller stores, Coop involves customers more into the process and the customer co-create with the company on the selection of products that is offered in the stores. Coop does not use netnography. In Maltesen's opinion it does not mean that companies are innovative just because they use the platforms for attaining customer knowledge. Coop used to be extremely innovative but not anymore. They are though more innovative than other Danish retail companies.

David Lewis

Neuromarketing can look at levels of attention e.g. from eye tracking and whether emotional responses are positive or negative. Further for example expose customers to a product design or a television commercial or whatever we are being asked to test and then compare their responses to that commercial and then compare them to where we know their responses. The equipment is very

expensive. About 90% of the analysis of the data is objective. The knowledge gained from neuromarketing can be of use in innovation. Essentially innovations are a human skill but where neuromarketing can assist is by actually enabling the product to be tweaked in small ways; to make it more desirable for the consumer. So the consumer will have a stronger emotional impact to it. Stronger emotional response and it can be quite small and subtle like changing a small part of the color of the thing or changing some parts of the design. There will always going to be room for great design innovations, people who can dress products up, who can make products like the Apple iPhone, which are very highly desirable and are very much ahead of their time. But there will come a point where using neuromarketing techniques, just these small subtle changes to the package, could be something as simple as changing the font on the design or changing the color, changing the shape, changing the feel, changing the texture, changing the aroma. All these very small subtle changes can in our experience make a huge difference to the effectiveness of the product. Lewis thinks neuromarketing could be useful across the pool i.e. many companies could benefit from neuromarketing. Because these days Lewis thinks it is more than ever persuasive marketing that is becoming more important, people don't like interruption marketing but they do like messages that have relevance to them. Yes it is going to be a big wave, we're going to see more and more sending through Social Media, we've done studies to see what people most trust on websites, getting recommendations from Facebook friends or celebrities to leverage what works best and identifying this (we did this job for charity actually) how they can make their appeal generate more revenue; if your best friends would say this is a great charity, you should support it or a celebrity would ask you to do that. Lewis thinks that is another area where people tend to think of innovations as a product innovation instead of innovations in persuasion. This is where neuromarketing can play an important role. Regarding conditions that need to be in place in order to make use of neuromarketing is the ability to move fast and not to be too conservative. Somebody at the top like Steve Jobs who says do this and don't do that, where decision-making is much more like a committee making decision. I think the smaller the faster. That's why like start-up companies can run rings around very often very established companies like Nokia possibly got so processed driven like other companies. Lead users are chosen as subjects and it depends very much on the demographic needs of the clients. The whole point of neuromarketing is the fact that it reveals customers tacit hidden needs.

Finn Wulff

Obviously there are the physical products that characterize an innovative company that you are able to generate products and launch new products. But most importantly Wulff thinks you should recognize it the way the cultural behavior is so you should see it as everybody's daily talk. You should see it in different key initiative plans per functions; everybody should have attention and focus on innovation. The way they speak about the company and the way they surprise us. You cannot put it on the agenda and in everybody's mind then you are not an innovative company. That could be new product but that could also be innovating new ideas, putting focus on doing things differently. It is very important to see it in the organization. For Carlsberg it is still a challenge to be innovative. Well it is still a big effort to remind people to be innovative in their thinking and looking at my own area, product development, we really need to push new products and new ideas in. New ideas are often in the beginning fragile, small chickens easily being crushed if you don't take good care of them and if we did not care about them they would be crushed immediately and then you would turn back to your daily business. So we really need to nurse these new ideas up to a certain level where people can see there is an idea! And very often we firstly see when new ideas are launched and we can see it is a success in the market, people are into the innovation part but all the way up to there are too many jumps and too many difficulties on our way to get up there. Both customer knowledge and consumer insight are extremely important. Customers are the gatekeepers in Carlsberg's case to get it to the consumers so both is interesting but the key thing to know about your consumer and it is a little bit difficult, you have to know the future for your consumers but it should be 80% knowledge and the maximum 20% guessing. Putting the pieces together on behalf of consumers and their future consumption. Very important! Wulff thinks it is important in the full process. He thinks you need to have several touch points with consumers. In the beginning you should be able to understand consumers so good that you can anticipate what could be a future consumption need for these consumers. And then put new concepts together and build new ideas, picking up trends, picking up what consumers are doing, thinking, drinking and whatever they do. Later on you start from consumer insight to build new ideas, new future ideas, and then you need to check again with consumers, are we on the right track yet, do you see anything new and interesting in this. Then later on again when the idea is even more crystallized you need to touch base on consumers again and then when launching you need to be in contact with consumers to understand is the launch

proceeding okay, are we catching up with consumers as we tended to do. It is a process linked several times into consumer insights. Carlsberg has several sources to generate insights. A lot if it is done online. Carlsberg has a unit, inside team, their job is actually be a central point for insights and every time someone in the company, from the brand side, innovation side or from the sales side, we touch points with this innovation center to build our strategies. So every time we need insights, we build it on the same platform. Carlsberg is little bit too conservative to use neuromarketing. So that's why maybe could be some good ways to look into this when it is not so used commonly we are all a little bit conservative. So when Wulff needs to have a proven idea through the stage gate process he needs to get the money in the bank for doing the launch, that is when he can say 80% of consumers like this. Look at this black on white 80% says yes thank you, good to go. So we are a little bit conservative to tap into this area. Wulff has some difficulties imagine the presentation showing neuromarketing-having tendency to show good to go. So he would invest all the company's money to do this, he would get some skepticism to that methodology. Regarding social media, we have some restrictions due to the legal guidelines in Denmark. So we are not allowed to ship out a lot of viral stuff through the media. So we are a little bit locked so we can do Facebook stuff and we can do traditional web stuff but we have some very tough guidelines. Facebook is mostly used for marketing purposes. Wulff thinks Carlsberg lacks a little bit on categorizing the Facebook user or the digital users. Are they any different from other people, do they have any first mover attendance or are they just like everybody else. Before answering that I need to understand what are the characteristics of these users, do they have a certain profile? We work a little bit with a terminology called first movers. They are identified with a lot of screening scenarios as identifying them as someone trying things first. So are these the profiles on Facebook or Internet sites? So that is a question mark, you need to understand their psychology profile. We would use it as we were talking about, the possible use of Facebook sites to do an interactive development process of more fixed concepts or fixed idea, this is our idea, do you like it? No because of this and that, change it and do you like it now? Some kind of interactive process in the last faces before launching the new idea. Finding ways to understand consumers, understanding their future needs upfront, any attempt to do that is vital information for gaining competitive advantages so yes it would. And we are still seeking and trying to take a look at research methodologies to make it better, to figure out information to be better upfront and to link information together for some useful insights, building new ideas from. Innovative companies are more prone to use the platforms for

innovation purposes. Wulff reflected on that it is both good and bad that Carlsberg is very big company regarding innovations. We have our cash cows and we use 80-90% of our resources to protect and maintain these. So anything, whether it is radical or just a simple idea it takes time and if it is more radical it is easier to kill in the beginning.

Gonzales Viera

Being innovative has to do with the culture of the company. So there are some companies that are always curious about understanding consumers and finding ways to satisfy their needs. The only thing is that this characteristic, this eagerness for understanding consumers and providing some products to satisfy their needs is something very unique because it really becomes a part of the culture. Carlsberg initiate the understanding of consumers. We need to understand why the space of needs is, so that's commonly used as the first step. So we go to a market and we say: so when people drink, what are the needs they satisfy. We apply different kinds of techniques, this neuro-diagnostics is just one of them. But with this neuroscience you can get information from connecting people to different devices. There are other techniques like for example when we do TV testing we do facial recognition and we also when we do shopper insights we do some eye-tracking exercises. So for the facial recognition it is very interesting because you show online a stimulus, you show a TV scene and then you have a camera. So the guy is looking into the commercial but we are looking at the guy. So we can see the expressions on the face, so given all the experience that these research agencies have you know that if they do something like that (shows an expression on his face) they are really being surprise, if they do this (shows another expression on his face) they are a little bit upset about what is being shown. And of course you can measure that in parallel to your TV scene. So you can analyze frame by frame of your TV scene how the body is reacting and how much emotions or reactions the TV scene is producing in the person. Carlsberg uses this information for innovations. For example, the neuro-diagnostics test with the latest test was for one of our brands, for launching the new communication campaign for next year, it was about ideas. These ideas were like narrative ideas, so they were not even pictures or TV scenes or TV commercials, nothing like that, it was just a narrative. This idea is extremely relevant especially for new products because you can see that an idea can be everything. An idea is an idea, it's just an expression of your thoughts, but the idea can be. Carlsberg uses several social media platforms but are really reliant on Facebook now. We are using Facebook heavily for our brands. Of course it

depends on the markets. In China they are using the similar platform to Facebook. The insight section, and the innovation section and we have a digital section in the marketing organization here in the company. These guys in digital are extremely clever and are really at the top of line in creating digital. So the way we are using the digital is very interesting because we have different segmentation of our users in the different tools we have, Facebook one of them but we also use Twitter and other platforms. In Facebook we have a segmentation that would go from fans, those people who go to your page and put like and then you access the page into super fans. Super fan are people that go and put like, then load content, share some comments, spread the news to people etc. The way we use this segmentation is very interesting because once people go into the page and interact with the page, we know the profile of these people. So we know if they are male, young, coming from a certain country, and then by understanding their profile, we also understand the interest of these people so we understand these kind of people are interested in e.g. what to do with friends on weekends and we know what they are talking about. Carlsberg uses the information for innovation purposes. It is both explicit and tacit customer knowledge. Carlsberg uses netnography in a continuous way to test products.

Håkon Langen

A company that is innovative is the one who dares to take the risks for the unknown and is not afraid of some failures. Have resources and money on it, and of course have a bit of return on it as well. And fast and innovation culture where it is easy to grow ideas. Langen discussed that established companies have a harder time innovating compared to start-ups. We are so big that we have actually optimized and improved everything over so many years so it's hard to find up something, which kind of competes on the same level as we have kind of quite low price products. We can't afford to double the cokes on everything because the consumers are not willing to pay double just for additional things like in other segments, for spirits, for jewelry or electronics, then the consumers are willing to pay a lot more for kind of the value. Whether Carlsberg is innovative depends on the comparison. One innovation that Langen described as a breakthrough innovation is the Draft Master System. Which some of my colleagues did, it's a one-way-PT-cage system, and instead of using the refillable heavy cages it's a one-way system. Its' better quality, it's low cost, it's easier handling, many advantages. That's quite new. Not lately, there are some years since we launched it, but it's still quite a breakthrough innovation. The consumer is very important. Neuromarketing could defiantly benefit the packaging

department at Carlsberg. Carlsberg is currently using Facebook and Twitter. The knowledge gained is not really transferred to Langen, more by coincident. But it is more about marketing efforts. Carlsberg has done a little bit of involving customer into the innovation process, but we don't do a lot of the co-creation part. We more test our concepts on them, get feedback and kind of see how they behave with our concepts or our products. But we are not doing co-creation as many companies are doing. But we are currently discussing it, how and if we want to. Langen thought that netnography could benefit Carlsberg later in the innovation process. But also when launching products, learning and to get feedback and learn how they receive the products in lead markets or test launches we could get fast learning and then improve it for the next markets. Online interaction is faster and perhaps more accessible as well. Easy to understand, that's of course an issue that we have that everything is filtered through many internal and external layers before it is coming to us. Or some layers at least. Agencies, if it's based in China, then agencies that can speak that language and then to our insight people and then transferred to the right channels internally. It might be missed a lot of information on that long… instead of linking to the person and then linking directly to the consumer. Regarding innovative companies are more prone to use the platforms, Langen reflected that a few of the bigger ones maybe, but I wouldn't expect many small ones, if they are not in the digital industry – then they would find it easy and accessible, but in other categories then I wouldn't believe small companies would, I don't know, it depends on how they do it kind of. If they do it just looking and searching what is happening then of course everyone can do that. But if it's more structured then it, if you do it so it becomes more quantitative not only qualitative one consumer thing then I think it is not that easy or accessible to small companies.

Hannah Zenk and Vanessa Monogioudis

So what characterizes an innovative company, they thought it's both the culture and the processes. Whether Ideo fits that description; yes it is very true for Ideo. What characterizes Ideo is also what characterizes an innovative company. Let's start with culture; there are some aspects on culture that is super important. For example it is super important to have a very disciplinary team set up and that is very true for us e.g. looking at the two of us, we have the same role here but very different backgrounds. In every project team here at Ideo that would be very true. There would be designers from various backgrounds and there are also people like me that are not designers but e.g.

psychologists. It is very important because coming from different backgrounds just leads to a very broad base of knowledge so we also say that we like to hire so called T-shaped people that are broad in various disciplines and has deep knowledge in one specific area. Similar backgrounds and similar stories are very typical for people at Ideo. So it is broad but also deep and we call that T-shaped. There is not much hierarchy at Ideo and that is important because it does not matter where you come from e.g. someone junior can have a really good idea that has the same chance of surviving like any other idea from a boss. It is very important cultural vise that we experiment a lot, that it is also allowed to feel like we have this very important principal of trying to feel relief, still kind of cheap and so that has a lot of do with prototyping, we just try out a lot and experimenting a lot and have this interactive process of trying, learning, trying again and learning more. It is important that it makes sense from a business perspective it has to be technically feasible but the point we start from always is does it makes sense from a human perspective, like it is really something that people want or need. Usually all of our clients are really good at understanding the business perspective and technique perspective and that's where we can really bring value where we come from a human perspective. In the end innovation should be where the three circles meet. As important it is to keep in mind the human perspective the business perspective is important. That is important for the process but then we start by talking to people and I think that is the most relevant ask about your topic. And then of course we prototype a lot and brainstorm and we have to stick to the cycle of that we start very broad and then come closer and closer to a solution. Customer knowledge is the core of it. Like Vanessa said Ideo always put humans first and even in product or services where no end user is like in B2B we really focus on the stakeholders. We try to figure out who are the people in that process and how do they interact with product or whatever we design. After the typical innovation process where you think okay the process of content development is finished now and that is when companies start thinking about like we said the innovation after the launch, we try to stay longer without clients to develop long-term relationships and to give them tools to that they selves can observe and track people and interact and innovate around that, behavior of people. Also more and more implementation where we experiment with life prototyping a lot, which means we also try to launch a product or at least part of a product/service as early as we can actually measure real marketing impact. When we do research very qualitative so we don't traditionally use quantitative methods. For us, it is not important but what is more important is to really get inspired by people. We are not typically looking at a big example of people but we try to

spend a lot of time with a smaller number of people and really get immerse and inspired by people and it is not just on a wing but it is really more being inspired and making something else of it, just process of interpretation. That's something that we can't ask people and also you cannot really measure it. We are super excited about all these new possibilities that you gain by social media or netnography. All the information you can gain by just people being online or viewing their behavior online or just having a Smartphone wherever they go. You can gather so much data by that but I think the big challenge is the future, how do you use all this data and how to interpret the data. How we talk about quantitative data is always also inspirational so we don't validate, we don't have that contact and the ask people or validate it by quantitative data but we get quite early inspired by that data that you gathered through whatever qualitative method and very important that it helps to ask new questions and it does not only answer the questions that we began to ask but no dataset is so clean or so true that it could ever answer the questions we have. At Ideo from the beginning on we work very interdisciplinary so it is not that just us having this knowledge and then there is this point we need to transfer our knowledge in other area, other discipline or other unit in the company but although we believe the research process is mainly us that think about which method to use and who to talk to but we do involve designers early on and also we are still a team in the process in later stages like when it is about prototyping or testing. Because our projects are so big and internationally and we would have so much to transfer from one project to another, but there are two problems. We are not allowed to store data in a lot of projects because we can't know the data of people, we use agency that throw the data and we always have to make sure that the participants are treated confident. Not really a problem but the principal at Ideo that face-to-face person-to-person contact is really important and we really try to not use email and Google place but make sure people are still interacting because that is how our value is transferred best. For each project we try to connect to the people who have already worked on some of the projects and we still think that is the best way to. Neuromarketing would be interesting as Vanessa is a psychologist and has used methods like this during her studies but the problem with it is that first of all it seems you need a quite a big sample to have a good outcome, really learn something, what is more important is that if you show someone a color and then you say okay now your brain is really active or something, you still don't know why that is. That could be for all kind of reasons. Don't even know whether it is a positive or a negative reaction. Therefore it is really hard for to make a conclusion for what it means for future behavior or something. You have to be a little bit careful of o it is so scientific and therefore it is

the truth as with a lot of more quantitative methods you really have to know how to use that and how to interpret that. But also there is not enough experience with using methods like these in the innovation process. I can imagine it is interesting like in the very beginning to learn more about human behavior and human reaction to a special stimuli but rather hard test it or use it on testing, not that we always find out what reaction is to a certain color. Innovative companies adjust and experiment with new methods and with new ways to gain knowledge and inspiration. About the different sectors, probably every company should stay in touch with their customers and should try to understand their customers. In the future, every sector there will be mobile and real time data. The more digital data you have the more related this data is to your value that you create, the more you can use it of course.

Kristijan Thorstensen

An innovative comany is about structure, processes that are not too settled. That Go Dream has some rules structured, some kind of idea pool. They have different idea pools where let's say customer service relations; they have most of the dialogue with end user. So they gather all their information and then leave reports e.g. marketing. So some kind of structuring all the ideas. When we hire we kind of try to go for different background, try to e.g. in the marketing department, not two people are even close. We really try to find diverse people. We really have a close collaboration with all kind of partners, stakeholders, our customers, B2B customers so you know we can gain knowledge insights from then so a lot of collaborations. Customer knowledge is extremely important. For innovation, NPD, for just doing minor or bigger changes. In terms of branding, your brand has couple of hundred touch points so basically optimizing all of them, close customers are a part of it but all other ones but customer knowledge is key for everything. Key for their existence, so important. Really in terms of product development, we try to make really strong relationships to the partners. Key partners who have a lot of knowledge within experiences. That could be Tivoli, they have worked with that for hundred years and they work with what we call here in Denmark family so they know a lot about things and within the action category, there might be some businesses which have more success than others at this time and of course we try to learn a bit more about business and why do they have this success in terms of trying to find other experiences. Which might have the same potential as. But also we actually have some side businesses. We have also Network, networking groups where key of the group is let's say one third of them are our own partners. All kinds of sales reps. That is also a way of getting to know

our partner's business and through that the customer. Netnography is something we use every day. You know Google analytics, so all of our websites we use Google analytics to monitor everything. Small improvements, bigger improvements, see how people move on our pages, where they spend time, where they are coming from in terms of traffic, which computer, which screen are they sitting on, how they react. Every now and then we do tests to see what they prefer and not prefer. Even our key partners have admittance to our analytics that could be our agency within Google ad words, our CEO, specialists, and when we build new web shops. Online today you know everything, you know where they come from so you place your advertising where the traffic comes from, you see exactly to what they react on. We know all about age. Inspiration, not so much from netnography. But social media is a really important business issue we get from here because if we can see in analytics that one category e.g. from last year the biggest grown category has been travel and hotel stay. This category is the fastest moving. Then we go and analyze more about this and we see where the traffic is coming from and we see what is going on within this and compare it to our target audience. And through that we get knowledge about why this category of consumers is growing. We never kind of interact with them. We just analyze their behavior. Then we interact with those companies which are having a good business e.g. when we focus on travel we partner up with Norwegian we cannot be specialists within air tickets. So we try to partner up. We dig into their knowledge sort of based on their customer knowledge e.g. which destination etc. the usage of neuromarketing Thorstensen would say settled companies, this is based on nothing other than his personal opinion, industries which are very, very settled. This might open up for some new understanding and since they very mature businesses where you know most parts have been optimized for the last 20-40-60 years. So this is kind of a new way of getting a competitive advantage but if you take Go Dream for example, constant growth 200-300% a year so just the fact that our, we have been focusing now on getting our products out in the stores. Last two years we have gotten from 600 shops in DK to 3200. So just focusing on our products has okay exposure in the stores, that they have prices that the shops actually display our products but just making sure that it is standing the right position for the mental thing because it is a 6 years old company, growing fast so more established businesses e.g. Coop, Bilka and Fotex. Young company in a young business. We can still use Porter. Facebook is the primary social media platform. Now Facebook has become something important, we have to lift it. So we started a process that will take us one year to get where we want but we have always used Facebook actively. In the beginning just as the dialogue with the consumers,

where we want to go is to make Facebook or social media platform which is integrated with our website. Actually what we want is C2C interactions. Then integrate that into online platforms. By this we can get some kind of creation from our end users. We monitor Facebook on a light version as we do on couple of our websites so we know all the demographic feature of a like. Our Facebook is not bad compared to our competitors but still like a 1.0 thing. We don't have enough C2C interaction right now but we do a lot of competitions where people can share their experiences, come up with opinions on what they like to do. We have got some good ideas in terms of NPD but not any more ideas that we can count on. We have ambassadors right now, probably in a year those ambassadors will be, ten years ago we called them first movers, today they have some special knowledge about one area. But right now we don't kind of, we don't flex that but of course we use, we have now about 8-10 ambassadors, which help us with innovations within their area. Management has to be aware of how customer knowledge can create value for the business. So it all has to start with top management, it all has to be part of the strategy and you have to measure some kind of things so you know what is a good idea. In terms of analytics, we all know that is an incredible tool for value creation and just making a website for. You can measure anything. In our case since we have web shops we know the value of netnography and social media is something we know the importance of. But also in terms of this but is has been pushed a little bit because we had other things that we could use the resources more efficiently. I think the starting point is top management and then you have to make some structured processes and kind of gaining this knowledge so it has to be systemized one way or another. When you do something, you have to be able to measure it. Online you can get quantitative but face-to-face it is more qualitative. Every now and then we do or ask if we have a problem within luxury e.g. we have around 80 café, no matter what we always have some bad ones. We might ask the customers about their experience and try to fix it instead of excluding the café's that could potential be bad. So it is solving a problem fast and efficient and as precisely as it can be. Interactions to find solutions. Tacit knowledge can be transferred through the Internet.

Nayeli Tusché

An innovative company is always, kind of not satisfied, always looking for more and more and more. That's the only way. Because when you're sort of not satisfied you're always without innovating or without innovative products you can't gain competitive advantage or differentiate from the other

companies. Innovative companies are ones that are in good contact or have a good relationship with consumers. And not really maybe with their own customers but they're willing to adopt knowledge from other stakeholders; being the consumer, different universities, being maybe suppliers meaning being maybe competitors as well. One very successful product, in which we were involved in different stages was a deodorant Black and White from Beiersdorf (Nivea), it was launched two years ago, that was a really successful product that was launched two years ago and it's been opened to press and Beiersdorf themselves are stating that it's the most successful deodorant launch in the history of Beiersdorf, which is really impressive. That was, let's say that created an open development of this product, started open an idea, which was then, verified by other tools, in this case netnography. We tried to understand and immerse into the world of the consumer, in the context of a deodorant, trying to find out what are the pain points, what are the real problems, how do the consumers solve these different problems. And this is how we got to one of the principal pain point, which was staining. Staining in different ways, you can talk about really sweat humid stains but you can also talk about yellow stains in white t-shirts or white stains in black t-shirts for example so at the end we got different types of stains from one of our consumer insights describing different stains and also the important part of it was that each kind of stain had also a good solution that is a good strategy, for example baking soda and sometimes vinegar. These kinds of solutions helped us understand where are the stains coming form. We all decided use consumer insights, consumer understanding and we developed different ideas of course internally with chemical research development; we worked together with Beiersdorf and also with the consumer on different ideas. We asked the consumer "where do you see the most potential? What idea do you like most of these different products which we would like to launch?" And at the end the consumers said, "Yeah, I think would like to buy this Black and White thing, because it's very painful to always have these stains in the t-shirts" and at the end they developed that they reformulated the formula and at the end was a product which it came out. And it's very, very successful. Customer knowledge is very, very, very important. At the end you can have really out-of-the-box ideas coming from your R&D department however it is always important to integrate the consumer. Not only from a market research perspective but also just to ask him "how would you do things?" because at the end he is the one that is going to buy the product, he's the one that is going to use the product. Well, at the end netnography work is for us always the very first step when we talk about innovation because we want to first understand that are the main issues, or the main problems or

pain points, when it comes to a certain topic. Netnography is on the one side a clever market research tool on the other side it is an innovation tool because as a market research tool you can find what the customer needs, like the typical consumer information, what does he feel, what is his routine and these sort of things. It's also an innovation tool because it gives you a lot of inspiration for example. It's not about stealing their ideas or anything, it's just about showing up. They are finding a solution by themselves because they are unsatisfied. You can really adopt and get expert knowledge from them. And why not, innovation companies may even talk to them and say "I would like to resolve a problem together and I see that you're an expert on the matter, can you help me?" and most of these people are intrinsically motivated, not many will say this is my package or I want to have money for that, so they're intrinsically motivated, at the end they're happy that someone is taking them seriously. We have different kind of users. In fact, we have made some research trying to compare online consumer insights and netnography and compare it with offline consumer insights, and at the end what we got is, well we had similar results but to be honest we had much more fruitful results from the consumer insights from the netnography. The reason for that is in netnography you try to integrate opinions and feelings of thousands of people. Of course you can never be sure that every single post comes from a different person but at least for thousands, let's say you analyze thousands different consumer statements you can be sure that at least 800 come from different members. In that view for example, you have much more of different perspectives. And that makes you as a researcher understand things much better. But going into the online communities where everything is anonymous, they even talk in very, very bad wordings, so you see them in a very natural environment, they have nothing to fear. Tusché loves this language of the consumer, the fact that he uses bad wording, want to hear his feelings and emotions, where he will show his true face. This won't happen in a focus group because you have e.g. a mirror, somebody is observing, you know that somebody is observing, so he's in a natural environment in social media, for example. The other thing is that you can log in whatever you want. You have time to think about the questions, if not, even better because you're not realizing that someone is analyzing or reading your post, which is even better. Sometimes when netnography projects can get answers to questions that did not come up. So at the end there are more answers than the questions. Netnography can reveal tacit knowledge, because sometimes, and this is really how we design a consumer insight. So for example when we do netnography of course we analyze the whole information but analyzing also means finding out what does that really mean. And this is really how to

get a consumer insight, a consumer insight is really different from a fact or an understanding; a consumer insight is for us like explaining things, a consumer insight would be something where the consumer says "wow, yes, this is exactly how things are and I even didn't think about that" this is a consumer insight, it is something like really fresh, something that is not that obvious, not obvious for the consumer himself. So consumer insight is something that he is even not aware of. And this is the cool thing about netnography; in netnography you really have to read between the lines. You really have to ask yourself "what does that mean?" so what, so what, so what, so what, yeah? And this is how you get to really the root of the problem. Sometimes you may have a lot of posts from consumers where you think "not interesting, not interesting, tell me something new" but then suddenly of course when you work for 8 weeks on a topic then suddenly it makes sense, you think "aha, this is the topic. Netnography is a crucial weapon, to get implicit information or insight, which is not the case for example with a more automatic research when you have like a crawl up. You get really more in-depth and more implicit information or implicit needs. Netnography applies to every industry. Well for Tusché an innovative company is someone that is open. Open to adopt new knowledge from wherever it is, and someone that is really, really in contact with his customers. And always having a top priority of developing, whether new products and these sort of things. But maybe they're more open to use such innovative tools and adopting platforms and using the knowledge of communities for examples yeah it's a signal of adopting state of the art technologies. Web 2.0 is state of the art, the new real and it is a signal that they are being open and developing new things. It has to be really culturally embedded within the company. That means it has to be a credo in the whole company. It's like a gene, like a gene and you have to incorporate it in every one of your employees and everyone has to pull or has to be behind this statement because otherwise if you don't have the whole crowd believing in this credo then it's difficult, you will have the not-invented-here syndrome. Netnography applies through all stages of the innovation process.

Niels Kornum

An innovative company is all about culture. It's very much about culture because you could always say that you're innovative but if it's not embedded in your culture nothing is exactly happening. Customer knowledge is very, very important. It's really amazing how a number of companies still haven't gotten the thing about, or the idea about that the customers are actually really important. What comes first is

the understanding about what is going on. You can't make a strategy unless you understanding what the consumers and stakeholders out there are thinking about themselves, themselves in the brand, themselves in the world, themselves in the world with the brand, and so on and so forth. And themselves in relation to others at that platform or that community how do interact around themselves in the world they share in that community and how is the brand involved in that dialogue. So it's pretty much about understanding what the dialogue is about and then understand is that in any way referring back to us, in what way is it referring back to us? And the way it refers back to us is that in any way referring to something that could be increasing loyalty for instance. What is important here is to see that the company should pursue some kind of arm-length relationship, they should try to understand what these groups want and not try to push all this marketing stuff in the throat of, that's very dangerous to day, people are simply opposed to it. Nor it should be the other way around, the company should try to understand what are these customers, what are their core values, do we have different groups with different core values, what are their lifestyles and hobbies and so on, and then you should provide a platform. You should of course monitor what's going on out there in a broad sense and you should, if you want to do something actively yourself, you could make up this kind of mainframe infrastructure for a discussion about things that would be relevant for people that only interactively relate to your brand, but you should of course also monitor what the dialogue about your company is out there. The question of tacit and explicit knowledge, that relates to - you know the question of whether we are aware of what we are saying and doing, what you can find on the Internet is what is said, but again we are talking about culture. Often these things that are being said are just an expression, an immediate expression of something cultural in that specific friend space, or a specific online culture, and often it is very difficult to interpret if you don't know that culture.

Trent Huon

When thinking about an innovative company, decentralized but people are empowered to do things. People are not necessarily reporting to a boss, not a strict sort of controlled hierarchy, people are actually empowered to do things and makes changes. Innovation starts from people and how much sort of opportunity you have given them. An innovative company needs to be able to manage all these different areas of innovation and making sure that they're balancing the day-to-day stuff, making the incremental sort of tweaks the processes and making them more efficient and running their core

business and then thinking about what are the sort of new areas that we should be focusing on, what's happening in five years, looking at our time horizon. What Ideo finds is that companies are running these big, what we call it the mother ship, they know how to do this thing and have been typically for decades if not centuries and they are super-efficient at it in running their own going of concern but then they apply the same set of metrics and same set of KPI´s [key performance indicator] to the new innovations and clearly you can't judge a new innovation on the same set of KPI´s as you judge your own going concern on them. Ideo finds that often the case so people sort of look what the ROI [return on investment]. It clearly starts up eventually, as it wants to get to ROI but it's not always going to happen in the first year or two and you need to make sure that you're not judging the start up on the same criteria as you used to judge your mother ship. A lot of clients don't get that and we spend a lot of time talking about that, having conversations with clients around how these innovative idea is going to actually work and before we often try to sell it like a start-up so it is actually external to the main organization. It can live and evolve and become something honest. Maybe it comes back into the mother ship and ends up a mature business but initially it can't run in there. Customer knowledge is everything. You can't disassociate, that is the success of IDEO the business success of IDEO. Obviously relates on how successful we have been in developing new ideas and the concepts for clients. It is all based on this concept of design thinking. Like the bubbles you found in that article, design thinking, and looking how an idea has evolved. Basically we start by figuring out what people want, what end-users actually want, either in a B2B context or B2C context. We always start that question on what do people actually want. We might make an educated guess on what they want, we might take some sort of provocative material to the interview but most of the time we start with open eyes and a level of empathy to figure out what challenges people are having today, what are their pain points and how can we potentially fill those gaps. That is basically how we work. For Ideo the customers are always a starting point for innovation. Ideo tries to do is observe the customer in their natural environment. If you look at the classic example of IPod, people did not say they wanted an iPod, they said their Sony Walkman sucks or whatever. You need to observe them in the environment that they are using the devices or how they are behaving. We do research for Swiss life, the financial service; we went and spoke to people in the Netherlands and the US and it is about challenges in life around finance. Or we recently did research for a bank in Spain around digital identity, we were talking to people at home and what does the term actually mean to them. What is important is going and talk to

people in their natural environment. That is where, it not necessarily the conversation that we observe, it is more the behaviors. You need to feel the customers in their natural environment. What works for them and what are their problems, both explicit and implicit. The only way, well a company can develop some awesome new technology and that might be the new thing, but understanding customers and what customers want particularly in this modern world where there are so many options for smart companies to understand their customers, through social media or having a conversation with their customers, is probably the most important way for a company to be innovative. Innovation leads to competitive advantage and differentiation then from there you get to growth. Understanding your customer is the best way to be innovative.

9.8. Appendix VIII: Recordings of the Interviews

The interviews recordings can be found on the enclosed CDs.