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Gearing up for innovation

How can a large organization facilitate knowledge transfer within the organization in order to learn from innovation?

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"The only true constant is change"

Heraclitus, 500 BC

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Gothenburg, a beautiful day on the 2nd of June 2017

Marcus Wahlberg

ABSTRACT

Title: Gearing up for innovation – How can a large organization facilitate knowledge transfer within the organization in order to learn from innovation?

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Key words: Organizational learning, learning from innovation, knowledge transfer

Background and Problem: The world is changing, and it's changing faster than it has ever done before. The Schumpeterian waves of creative destruction that companies were once able to ride on for decades are increasing in both frequency and ferocity, and just like the waves erodes the shoreline, the waves of creative destruction erode the profit of companies not able to cope with the changes (The Economist, 2009). In this changing world, an organization's ability to innovate has been suggested as crucial in order to stay successful (Hult, Hurley, & Knight, 2004). Unfortunately for organizations, not enough is known about the actual process of innovation, and innovation has for a long time been viewed as a "black box" (Kline & Rosenberg, 1986). In recent years, however, innovation has increasingly been seen as an iterative learning process, where organizations strive to acquire knowledge user throughout the whole innovation process (Blank, 2011; Christensen & Raynor, 20003; Ries, 2011; Kim & Mauborgne, 2005; Trott, 2012). Thus, innovation becomes a process of acquiring knowledge.

Knowledge is an interesting asset, as it can hardly ever be possessed. Knowledge at an individual level can easily be forgotten, not only because of the limitations of the human memory, but also as individuals tend to change workplace over the course of their professional career (Easterby-Smith & Lyles, 2003). Thus, it is vital for companies who wants to remain successful to nurture and retain knowledge, and transfer knowledge from the single individual to the organization. This process is called organizational learning (Fiol & Lyles, 1985; Murray & Donegan, 2003; Popova-Novak & Cseh, 2015). In fact, Geus (1988) argues that an organization's only competitive advantage will be its ability to learn faster than its competitors. However, despite the potential upside of having a learning organization and the importance of innovation, there is little research done on how organizations actually strive to transfer knowledge within the organization in order to learn from innovation.

Purpose: This research is an explorative study of CellMark AB, a company that has recently made great efforts to become more innovative, making it an interesting object to research in

order to increase the understanding how a large organization facilitates knowledge transfer within the organization in order to learn from innovation.

Method: This research has adopted an interpretivistic approach to conducting research. As the research pertains to a social phenomenon, a qualitative research method was used in both the empirical data collection and the data analysis. The research is designed as an explorative single case study at CellMark AB, and the level of analysis is supra-individual as it adheres to the constructivist paradigm. The empirical data has been collected through six semi-structured interviews conducted with six respondents working for CellMark AB.

Results and Conclusion:

The research points to the usage of teams and cultural alignment as two ways that large organizations facilitate knowledge transfer within the organization in order to learn from innovation. Teams can be perceived as engines of learning, as they provide a forum for knowledge transfer and are more easily managed than complex organizations. Team members can on their part perceived as ambassadors for innovation, and can be seen as a link between members of the organization and innovation. However, without a culture that promotes learning, the knowledge gained by teams will not trickle down (or up) in the organization. Thus, large organizations can attempt to create a learning culture through, for example, formal statements of organizational philosophy, which aligns the culture towards teams and learning. By aligning the culture of the organization towards teams and learning through formal statements of organizational philosophy, there is an over-arching force that pulls the rest of the organization towards the teams, who are working with innovation.

The system at play to learn from innovation can be described as a push-pull mechanism. From the team perspective, the teams *push* knowledge gained from innovation to the organization through communication and interaction. The *pull* is created through a culture that emphasizes learning and engagement, created through formal statements of organizational philosophy, which encourages the flow of knowledge and learning. Plausibly, underlying factor of the pull mechanism, namely the cultural alignment that encourages learning and engagement, is also prevalent in the pull mechanism in the form of a culture that emphasizes communication and interaction. Consequently, by reinforcing the teams push capabilities and the organizations absorbent pull capability, large organizations can facilitate knowledge transfer in order to learn from innovation.

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1. Introduction

The introductory chapter paints the reality in which this research takes its foundation from. First, a broad introduction of current state of affairs within the field of innovation will be presented, focusing on why innovation is important. Once the importance of innovation has been established, the focus will narrow in scope and the idea of organizational learning will be discussed, followed by a brief introduction of the focal organization of this study. Subsequently, the problem that this research addresses and the research question is then presented, followed by delimitations and a brief overview of the research structure.

1.1 Innovation's role in the 21th century

The changes that are occurring in society can hardly have escaped anyone, and they have become forces to take into consideration. The Schumpeterian waves of creative destruction that companies were once able to ride on for decades are increasing in both frequency and ferocity, and just like the waves erodes the shoreline, the waves of creative destruction erode the profit of companies not able to cope with the changes (The Economist, 2009). The corporate world has not been oblivious to this threat. In 2016, the world's 20 largest spenders on R&D together spent almost USD 170 billion, slightly higher than the GDP of the oil-rich nation of Qatar (PWC, 2016; The World Bank, 2016). Among the top-spenders were world renowned multinational corporations (MNCs) including Volkswagen, Microsoft, Pfizer and Apple, whom ceteris paribus, would probably continue their respective trajectory of business success. However, the world is far from constant, and the occurrence of change and innovation is no longer discussed as "if", but rather as "when", and an organization's ability to innovate has been suggested as crucial in order to stay successful (Hult, Hurley, & Knight, 2004).

Unfortunately for organizations, not enough is known about the actual process of innovation for a sound universal innovation model to have emerged, and innovation has for a long time been viewed as a "black box" into which resources are poured and innovation miraculously retrieved from (Kline & Rosenberg, 1986). In recent years however, innovation has increasingly been seen as an iterative learning process, where organizations strive to learn and adapt throughout the whole innovation process (Blank, 2011; Christensen & Raynor, 20003; Ries, 2011; Kim & Mauborgne, 2005; Trott, 2012). As knowledge is the outcome of learning (Argote, 2013), innovation can be seen as a process of acquiring knowledge.

1.2 Knowledge in an organizational context

The knowledge that exists within an organization is colloquially referred to as knowledge capital, and it has emerged as an increasingly important asset for companies. Many companies are today traded on the stock market at prices several times higher than their respective book value (Standard and Poor's, 2017). Appelbaum and Gallagher (2000) argue that the difference can to a large extent be attributed to the companies' knowledge capital and its employees, and based on the price, it is anticipated that these will play an increasingly important role in some ill-defined future. Yet, companies are often not capable of transforming their knowledge capital to their bottom line (Appelbaum and Gallagher, 2000). Furthermore, knowledge at an individual level can easily be forgotten, not only because of the limitations of the human memory, but also as individuals tend to change workplace over the course of their professional career (Easterby-Smith & Lyles, 2003). Thus, it is vital for organizations that wants to remain successful to nurture and retain knowledge, and transfer knowledge from the single individual to the organization. This process is called organizational learning (Fiol & Lyles, 1985; Murray & Donegan, 2003; Popova-Novak & Cseh, 2015). Organizational learning, as the name implies, takes place in an organizational setting. In this research, the focal organization of study is CellMark AB.

1.3 Company profile - CellMark AB

CellMark AB (hereafter referred to as CellMark or The Company) is a Swedish supply chain service provider and distributor or raw material for the global paper and pulp industry headquartered in Gothenburg, Sweden (CellMark AB, 2016). Since its foundation in 1984, CellMark has drastically expanded its geographical presence and in 2015, The Company had over 700 employees in 70 offices distributed over 30 countries, with sales of USD 3 billion in more than 120 countries (ibid.). The Company has a divisionalized company structure and is active in Chemicals, Metals, Pulp, Paper, Packaging, Recycling, Energy, Basic Chemicals and Medicals (ibid.).

CellMark has always been characterized by a high entrepreneurial spirit and innovation, demanded partly by the fast-paced and changing nature of the industries The Company is active in, and partly because of its quest to find new profitable business. In the last two years, efforts have been made to become more structured in its innovation activities. CellMark has shifted from being a traditional "trading house" to working more actively with innovation and

innovation management (CellMark AB, 2016). The reasons for this shift may vary, but according to CellMark's annual report its different divisions face large fluctuations and volatility in commodity prices, changing market conditions and technological disruptions that threatens CellMark's core businesses (CellMark AB, 2016).

Thus, CellMark is feeling the pinch of the transformative waves of innovation and changing business climate. According to Mr. Joe Hoffman, Division President of CellMark Paper, one way of coping with these threats is to innovate (CellMark AB, 2016). The notion that innovation is an important issue for CellMark is further emphasized by Mr. Fredrik Anderson, CEO and President of CellMark, who states that "We at CellMark are committed to live [CellMark's Guiding Principles], further strengthening our ability to read and understand the needs of our partners in our search for innovation and improvement as we tirelessly attempt to surpass expectations! We are a platform of global entrepreneurs, bound together by our desire and enthusiasm to cultivate innovation, to constantly improve our service offerings and to develop synergies and new ideas together with our partners, growing our business!" (CellMark AB, 2016: 12).

1.4 Problem discussion

Organizational learning has received a lot of attention from both academics and practitioners. The idea behind organizational learning, that an organization can attain and retain knowledge held at individual level and transfer it to a level where it can be used by multiple individuals, could potentially alleviate and mitigate some of the issues and challenges often associated with knowledge drainage (Fiol & Lyles, 1985). Furthermore, as "innovate or die" is the new status quo, and innovation is a knowledge intensive process (Blank, 2011; Christensen & Raynor, 2003; Ries, 2011), one can assume that there are great benefits for companies capable of transforming knowledge gained from innovation at an individual level to organizationally held knowledge. In fact, Geus (1988) argues that an organization's only competitive advantage will be its ability to learn faster than its competitors. However, despite the potential upside of having a learning organization and the importance of innovation, there is little research done on how organizations actually facilitate knowledge transfer within the organization in order to learn from innovation.

CellMark is a large corporation that has undergone major changes in recent years, and efforts have been made in order to become more innovative. Meanwhile, the literature on innovation has increasingly stressed learning as a key factor for successful innovation, and learning is the acquisition of new knowledge. However, knowledge at an individual level can easily be forgotten and disappear, as employees change workplace or simply forget. Consequently, organizations need to transfer the knowledge from the single individual to the organization, in a process called organizational learning. From the literature, it is however not clear how organizations facilitate knowledge transfer within the organization in order for the organization to learn from innovation.

1.5 Research question

Based on the above stated problem discussion, the following research question is proposed:

How can a large organization facilitate knowledge transfer within the organization in order to learn from innovation?

1.6 Delimitations

Technological advances and strenuous work by research has increased our understanding of the inner workings of the brain over the years, yet the process of learning remains swept in a coat of mystery. Although an interesting topic of research, the author has intentionally stayed clear of taking into consideration biological or psychological aspects or learning, in favor of research pertaining to the process of learning. Thus, the focal lens is shifted upwards away from the individual member of the organization towards processes within the organization. Furthermore, organizations are rarely active in a vacuum but interact with external actors on a daily basis. According to Zollo and Winter (2002), the external environment's role in learning is twofold – it supplies stimuli and provokes internal reflection on improvements of existing routines, and it provides feedback on the organization's current behavior. While acknowledging the importance of these two, the focus of this research is on internal processes and by excluding external environments, the scope of the research stays manageable.

1.7 Research Structure

Following the introduction, the theoretical framework that this research adheres to is presented, which is followed by the methodology, empirical data, analysis and conclusion, as outlined below:

1. Introduction

2. Theoretical Framework: The theoretical framework presents theories and past research on subjects relevant for this thesis. The chapter includes organizational learning, knowledge transfer, organizational culture and innovation.

3. Methodology: In the methodology, the choice of methods that have been used in this thesis are presented and motivated. Additionally, this chapter describes how the empirical data was collected, managed, analyzed and discussed in the analysis.

4. Empirical Data: This chapter presents the findings from the qualitative semi-structured interviews conducted for this research.

5. Analysis: This chapter presents the similarities and differences between the gathered empirical data and the theoretical background, which are discussed and analyzed.

6. Conclusion: In the final chapter of the thesis, analysis is summarized in regards to the research questions and the objective of the research into a descriptive conclusion resulting in managerial implication. The chapter ends with suggestions for future research in areas which this research did not address, but that could provide valuable insight.

2. Theoretical framework

The theoretical framework is, as the name implies, the framework to which this research adheres to in its quest to understand how a large organization facilitates knowledge transfer within the organization in order to learn from innovation. The body of this chapter revolves around organizational learning, which is discussed through knowledge transfer and culture, together making up the three main theoretical pillars supporting this research. In order to contextualize the research and the subject of organizational learning to innovation, the subject of innovation as such is theorized upon in connection with learning.

2.1 Organizations' quest to learn

Over the last decades, learning has emerged as a vital factor for organizations in order to attain and maintain a competitive advantage over time (Senge, 2000; Stein, 1995). The notion that learning enhances strategic performance of organizations is widely accepted (Fiol & Lyles, 1985), and the pursuit of organizations to learn has become a cornerstone of today's knowledge intensive companies (Appelbaum & Gallagher, 2000). Knowledge is an interesting asset; it is hardly ever fixed and even "possessing" an employee with certain knowledge does not guarantee that the organization can benefit from it. Appelbaum and Gallagher (2000) proclaim that organizations will not reap the benefits of employees' knowledge without an adequate structure to enhance and support the knowledge – as employees might leave the organization at any time. With the seminal works of Maslow's hierarchy of needs (1943) and Herzberg's theory of motivational factors (1959) in mind, retention programs and bonuses appears like primitive incentives for sticking with an organization. Instead, employees want to develop, learn and evolve (Drucker & Senge, 2000; Maslow, 1943; Panagiotakopoulos, 2013). This is fortunate for organizations, because it is through learning that organizations can achieve an environment that stimulates innovation and improvement, making the organization more agile in order to respond to changing demands and business (Murray & Donegan, 2003).

Regardless if its technology, customer or competitor driven, change is affecting all industries and companies have to improve and learn in order to remain competitive (Kotler, 2002). In this context of changing demands and uncertainty, a concept of learning within organizations have emerged in literature: Organizational learning (Fiol & Lyles, 1985; Huber, 1991; Valaski, Malucelli, & Reinehr, 2012).

2.2 Organizational learning and the learning organization

The concept of organizational learning as such is a fairly new field of study, yet its roots can be traced back to different managerial perspectives that go deep into the soil of management, both in terms of the width of the roots (the scope of perspectives it covers) and the length (its historical legacy) (Garratt, 1999). Perhaps due to the fact that the concept is rooted in many different managerial perspectives, or because academics in the field of management tend to pay an awful lot of attention to semantics, organizational learning is a fairly ill-defined topic, and most of the definitions that exist are of a complementary nature rather than fundamentally different (Matlay, 2000). This, according to Cohen and Sproul (1999), makes the field of study excessively broad, and defining and mapping organizational learning in a consistent way is difficult (Probst & Buchel, 1997).

In their review of existing literature on organizational learning, Wang and Ahmed (2003) distinguish between five different views on organizational learning, compiled in Table 1. In addition to these, some researchers add other layers to the concept by including the quality of the learning and repetition, among other aspects (Pedler, 1994). Although important, these are perhaps more shades or leverages of organizational learning as opposed to defining the actual source, which does not add nor contradict the five concepts proposed by Wang and Ahmed (2003).

Table 1 – Views on organizational learning

FOCUS	INDIVIDUAL LEARNING	PROCESS OR SYSTEM	CULTURE OR METAPHOR	KNOWLEDGE MANAGEMENT	CONTINUOUS IMPROVEMENT
PRACTICE	Staff training and development	Enhancement of information processing and problem solving capability	Creation and maintenance of learning culture: collaborative team working, employee empowerment and involvement	Facilitation of interaction and strengthening of knowledge base	The adoption of TQM practices

Source: (Wang & Ahmed, 2003)

As evident from Table 1, there is not only a lack of definition, but also a lack of common focus when studying organizational learning, thereby inhibiting a common level of analysis among researchers (Ulrich, Jick, & Glinow, 1993). Furthermore, researchers studying organizational learning do not typically adhere to the tradition of positioning themselves epistemologically nor

ontologically, further mystifying the field as such (Rowlinson, Booth, Clark, Delahaye, & Procter, 2010). Perhaps the most palpable effect of this is the discrepancy between levels of analysis on the individual level and organizational level (Popova-Novak & Cseh, 2015). Consequently, it becomes difficult to build a cohesive theoretical framework and conduct research.

Atypically for a theoretical framework, this research's paradigm stance will be presented here in order to maintain a path through the jungle of organizational learning theory. The research has a constructionist view of organizational learning (Popova-Novak & Cseh, 2015), meaning that the focus of the theory will be on intra-organizational factors, such as culture, specific situations, activities and communication (Lave & Wenger, 1991; Nonaka, 1994). While acknowledging the individual's role in organizational learning, it deemphasizes the importance of the individual's knowledge and the psychological concept of individual learning (Weick, 1991), and instead focuses on intra-group learning. As noted by Huber (1991), organizations with good organizational learning have fostered a strong learning culture which excels at acquiring, creating, and transferring knowledge, and adjusts its behavior according to the new knowledge it has. Consequently, organizational learning can be viewed as a process which retains and expands individually held knowledge and elevates it to the level of the organization (Nonaka, 1994).

Although there is a widespread notion that learning improves future performance (Kotler, 2002), a problem emerges as there is no clear definition of learning (Fiol & Lyles, 1985), as seen in Table 2.

Table 2 – Definitions of learning

DEFINITION	SOURCE
New Understanding or Knowledge	(Argyris & Schön, 1978; Hedberg, 1981)
New Structures	(Chandler, 1962)
New Systems	(Jelinek, 1979; Miles, 1982)
New Actions	(Cyert & March, 1963; Miller & Friesen, 1980)
Some Combination Of The Above	(Bartunek, 1984; Shrivastava & Mitroff, 1982).

Source: (Fiol & Lyles, 1985)

By looking at the table above, however, it is evident that learning includes a certain level of novelty and one can assume that the use of the word *new* in the table above does not refer to it

being objectively new to the world, but rather new in the context of the learner. If it's new to the learner, whether it is new systems (Miles, 1982) or actions (Cyert & March, 1963), means that the learner acquires new knowledge. This, according to Fiol & Lyles (1985), points to learning as the acquiring of new knowledge, as proposed by Argyris and Schön (1978) and Hedberg (1981), and shown in Table 2. Yet, acquiring knowledge or learning is not enough for it to be considered organizational learning, as it is not the pursuit of knowledge per say that is the objective of most organizations, but rather the transfer and use of the acquired knowledge within an organization (Senge, 2000).

Viewed from this perspective, organizational learning can be defined as an interactive "process of individual participation in collective situated practices and discourses that reproduce and simultaneously expand organizational knowledge" (Popova-Novak & Cseh, 2015:316). Following this line of reasoning, Edmondson (2003) posit that organizational learning is developed in localized and interpersonal settings where members of an organization work together. Consequently, the focal point of learning in organizational learning is in pluralistic groups and teams of members within the organization (Swan, Newell, & Scarbrough, 2010).

2.2.1 Sources of learning

In line with the contructivistic stance of this research, Murray and Donegan (2013) posit that the analysis of learning is relevant only when investigated as an entity dependent of other organizational aspects such as values, competencies, knowledge and culture. Murray and Donegan (2003) propose five different levels of learning, linking patterns of behavior with each of the five levels of learning, as shown in Table 3. These five levels are in falling order of sophistication, where basic organizational learning is characterized by repetitive behavior that builds knowledge solely based on previous experience (Argyris & Schön, 1978; Fiol & Lyles, 1985) and sophisticated organizational learning is characterized by an organization that challenges even the system of behaviors that the organization has institutionalized (Argyris & Schön, 1978; Fiol & Lyles, 1985).

Table 3 – Levels of learning

Level of Learning	Behavioral routines or Key characteristics
	Basic ↓
Simplistic-Driven Learning	Basic, Ad-hoc, experience-based, incremental, unplanned, not sequential.
Structure-Driven Learning	Routines, systems and procedures, reactive.
Efficiency-Driven Learning	"Do tasks the rights way", output driven, efficiency efforts drive learning.
Value-Driven Learning	Questioning current beliefs, proactive engagement in innovation and incremental improvements, management and staff drive learning, emphasize on generation of new knowledge.
Dynamic-Driven Learning	Constant change, cogitative bias towards change, group or collective learning, team based learning, innovation and knowledge creation is premiered, delegation of responsibilities and power.
	Sophisticated

Source: Author's conceptualization based on Murray and Donegan (2003)

By looking at Table 3, it is evident that innovation relates to learning, predominantly in routines associated with more sophisticated levels of organizational learning (Murray & Donegan, 2003). Thus, innovation can be seen as one driver of sophisticated organizational learning. However, in order to understand why innovation is associated with learning, the concept of innovation has to be further explored and theorized upon.

2.2.2 Innovation and learning

The importance of innovation for organizations is widely accepted, and it was thrown into the spotlight by Joseph Schumpeter in his discussions on innovation and its effect on firms and society, by many considered to be the one of the earliest of its kind (Trott, 2012). Schumpeter outlined innovation as 1) the introduction of new goods; 2) the introduction of a new method

of production; 3) the opening up of a new market; 4) the capture of a new source of raw materials or half-manufactured goods; and 5) new form of organizational structure (Schumpeter, 1939). Lately, this list has been expanded to include other aspects such as management innovation, commercial/marketing innovation, and service innovation (Trott, 2012). Perhaps taken out of its context, or perhaps due to Schumpeter's interested in the economics behind innovation and not its managerial implications, the above stated definitions are remnant of secluded events. Thompson (1965: 2) instead proposes a three-stage model where "innovation is the generation, acceptance and implementation of new ideas, processes products or services". However, according to Kimberly (1981), innovation should be viewed in different perspectives as either a process, as a discrete object or item and/or as an organizational attribute.

Regardless of exact definition, the notion that innovation is a process as opposed to a single event is not new and was highlighted by Marquis and Myers when they stated that "Innovation is not a single action but a total process of interrelated sub processes. It is not just the conception of a new idea, nor the invention of a new device, nor the development of a new market. The process is all these things acting in an integrated fashion" (Marquis & Myers, 1969 cited in Trott, 2012: 15). However, it should be noted that *new* in the above described sense (and presumably what Schumpeter was referring to as well) does not primarily revolve around it being objectively new as measured in units of time, but rather its perceived "newness" or differential factor (Trott, 2012). According to Baregheh, Rowley and Sambrook (2009), the above mentioned "newness" is closely associated with change, a notion shared in Damanpour's frequently cited definition of innovation as "[…] a means of changing an organization, either as a response to changes in the external environment or as a pre-emptive action to influence the environment. Hence, innovation is here broadly defined to encompass a range of types, including new product or service, new process technology, new organization structure or administrative systems, or new plans or program pertaining to organization members" (1996: 694).

Damanpour's definition, albeit over 20 years old, encompasses much of Schumpeter's focus on novelty and is aligned with the current views of the innovation process, where innovation is considered a continuous, often nonlinear and iterative, process requiring continuous change where the *modus operandi* is to constantly challenge the underlying assumptions of the innovation (Blank, 2011; Kline & Rosenberg, 1986; Ries, 2011). Thus, innovation can be

viewed as a process of adapting and changing in the wake of new knowledge, and according to Blank (2011), the key element of the innovation process is to learn. The process of adaptive learning has gained prominence as it addresses one of the fundamentals challenges of innovation – uncertainty (Polley, 1992). Although there exists plenty of models on how to plan and execute on projects, innovation is usually associated with high uncertainty and novelty, making predictions and plans about the future unreliable (Mintzberg, Raisinghani, & Théorêt, 1976). Because of the uncertainty and the inherit difficulty of planning, it is important for organizations to actually learn from its innovation work as it's a process of adaptive learning. However, without proper transfer of gained knowledge, the knowledge will stay with the individual(s) involved in the project, with potentially little benefit or implication for the organization as a whole. Consequently, the next section of the theoretical framework revolves around the transfer of knowledge within an organization.

2.3 Knowledge transfer in the context of an organization

Up until this point, organizational learning has been theorized on a broad conceptual level and sub-grouped into five levels of learning with corresponding activities and routines that leads to each learning level, and the connection between learning and innovation has then been established. Thus, the focal level in this theoretical framework has so far been at a supra-individual level. However, all organizations consist of individuals, and "organizations can learn independent of any specific individual, but not independent of all individuals" (Kim, 1993:37). Yet, the mechanism under which the knowledge attained from learning is dispersed within an organization in order to create organizational learning has not been discussed, which seriously dents the usability of the theoretical framework from a practical point of view. This is what will be discussed next. Before embarking on that journey however, a crucial distinction has to be made - knowledge can be dispersed and transferred, whereas learning can't. The reason behind this is that knowledge is the outcome of learning (Argote, 2013), and learning is according to Kim (1993) personal and dependent on the mental model of the individual. However, Bates (1998) posits that knowledge is in fact the basis and not product of learning. This line of reason follows a knowledge-based perspective (Nonaka, 1994), and is based on the idea that in order for an individual to learn, the individual first has to become aware of something. Whether knowledge or learning comes first doesn't matter in the context of this research however, as the focal unit of analysis is not the processes of converging knowledge.

In order for organizational learning to occur, the knowledge learned by the individuals in the organization must be transferred to the organization, and embedded within the organization (Argote, 2013; Nonaka 1994). Knowledge transfer and knowledge sharing has attracted much attention in recent years, yet the line between the two terms is blurry (Paulin & Suneson, 2015) and the usage of respective term is largely arbitrary (Michailova & Mustaffa, 2012). To complicate the matter even more, other terms such as "knowledge flows" and "dispersed knowledge" are used interchangeably as synonyms, partly due to the fact that the topics tend to converge (Jonsson, 2008; Michailova & Mustaffa, 2012). Consequently, in this research the terms will be used interchangeably as synonyms.

Knowledge is what permits individuals to define, prepare, form, and learn to solve a task or problem (von Krogh, Ichijo, & Nonaka, 2000). Argote (2013) argues that by embedding knowledge in supra-individual routines, knowledge will stay in the organization even if the individual whom contributed with the knowledge leaves. Knowledge is widely seen to be located somewhere along an explicit-tacit continuum (Easterby-Smith & Lyles, 2003 Nonaka, 1994; Nonaka & Takeuchi, 1995; Polanyi, 1966; Teece & Pisano, 1994). As seen in Table 4, explicit knowledge is often formalized and codified, making it relatively easy to transfer and manage, whereas tacit knowledge is ill-defined, intuitive and largely experience based and rooted in action and involvement.

Table 4 – Explanation of Explicit and tacit knowledge

Type of knowledge	Key characteristics	Common forms of transfer
Explicit	Codified, formalized	Writings, spoken instructions, pictures, manuals, drawings
Tacit	Ill-defined, intuitive, experience based	Practice, social networks, observation, imitation

Source: Author's own based on Polanyi (1966) and Nonaka (1994)

The notion of an explicit-tacit continuum-based categorization of knowledge is a product of researchers' disbelief that information could be equated with knowledge and that knowledge was a static asset as opposed to a dynamic process (Nonaka & von Krogh, 2009). However, although the framework of explicit-tacit knowledge is highly regarded by many (Easterby-Smith & Lyles, 2003), it has drawn criticism for being too simplistic (Nielsen, 2002) and merely

being a term to explain a phenomenon that the observer is not able of understanding or interpreting (Perraton & Tarrant, 2007), consequently denting the explanatory value of the concept.

In an ideal world, both types of knowledge would freely flow between individuals, however, organizations often encounter difficulties when transferring knowledge (Nonaka, 1994; Szulanski, 1996; Von Hippel, 1994). Stickiness is a word frequently used to describe an organizations ability to capture and retain knowledge, and relates to the fact that knowledge is often embedded in an organization's social structures (Von Hippel, 1994), especially when knowledge is tacit (Nonaka & Takeuchi, 1995). Based on the work of Von Hippel (1994), Szulanski (1996) explored different impairments to knowledge transfer and distinguished two distinct categories: Personal factors and organizational factors. *Personal factors* include lack of motivation (Gupta & Govindarajan, 2000; Szulanski, 1996), and recipient's lack of absorptive capacity including causal ambiguity and adaption problems (Szulanski & Jensen, 2004). There are also cognitive barriers that decreases personal stickiness, including distrust, lack of understanding and reluctance to change as well as reluctance to change (Szulanski & Jensen, 2004). *Organizational factors* impairing knowledge transfer include practices, structures and systems that inhibits transfer (Szulanski, 1996) and can according to O'Dell and Grayson (1998) be divided into five categories, as seen in Table 5.

Table 5 – Organizational factors limiting knowledge transfer

NAME	CHARACTERISTICS
"The Silo" company	Knowledge transfer is confined to the specific division or unit and discourages outside
"Not-invented-here" syndrome	Individuals are unwilling to accept knowledge not created within the business
"The babel" company	Unstructured or chaotic system where there is little coordination between different sections of the organization
"The by-the-book" company	The focus is only on explicit knowledge, and everything must be documented
"Bolt-it-on" company	Knowledge sharing is expected to be in addition to daily work, and not part of it

Source: Author's own based on O'Dell and Grayson (1998)

Furthermore, knowledge transfer is hampered if members of an organization identify themselves more with their business unit or division than with the organization (Burgess, 2005). One way of overcoming these challenges or obstacles is to have an organizational culture in which these are addressed and mitigated (Szulanski, 1996), as an organizations' culture can help organizations to adapt (Denison & Mishra, 1995; Keesing, 1971). Thus, the last leg of this theoretical tripod is on organizational culture and its role in creating a learning organization.

2.4 Organizational culture and the creation of a learning organization

Organizational culture is considered as one of the most important input to encourage (or impede) learning and knowledge transfer, as organizational culture determines values, beliefs and work systems which shapes the way the organizations acts (Alavi & Leidner, 2001; Leonard, 1995). However, the concept of organizational culture has also been criticized for being overly promising as some forms of organizational culture will be either irrelevant to performance and even inhibit efficient operations (Wilkins & Ouchi, 1983). An organization's culture affects an organization's capabilities and can help the organization to innovate and change (Lynn, 1999), as it can function as a standardization mechanism of cogitative behavior and interpretations, thus affecting the effectiveness of an organization's behavior and organizational learning (Mahler, 1997). Yet similarly, culture might in fact hamper innovation and change, if the culture of the organization is not aligned with the current needs of the market (Gonzalez, 1987). However, as noted by Kilmann (1987), organizations' inability to adapt to changing demands is perhaps the result of a strong "inhibiting" culture, as opposed to having a strong enabling culture, which would be the other side of the same cultural coin. Furthermore, a general criticism of organizational culture theory is the emphasis on the organization's culture as a static object (Martin, 1992).

An organization's culture is important for creating a learning organization (Alavi & Leidner, 2001; Leonard, 1995), and it has been suggested that an absence of communication between an organization's diverse cultures can hamper organizational learning (Schein, 1996). This point to the importance of either increased communication between cultures, or harmonizing an organization's culture(s) into one. According to Schein (1990), the leader of an organization has an important role in harmonizing an organizations culture, as the leader is vital for creating and maintaining a specific culture within an organization. Apart from the leader, there are other mechanisms for embedding culture within an organization, including criteria for rewards,

criteria for recruitment and development, organizational design and systems, stories and legends of the organization and formal statements of organizational philosophy (Schein, 1983).

2.5 Summary of theoretical framework

The theoretical framework starts with a broad discussion on organizational learning, where the foundation of the theoretical framework is laid. The concept of organizational learning is first problematized, and it is evident that there is no widely accepted framework to use, but rather many competing ones. Yet, from the theoretical framework it emerges that organizational learning should be viewed through intra-organizational factors, such as culture, specific situations, activities and communication (Lave & Wenger, 1991; Nonaka, 1994; Popova-Novak & Cseh, 2015). However, the role of the individual can't be dismissed, as "organizations can learn independent of any specific individual, but not independent of all individuals" (Kim, 1993:37). Based on the theoretical framework, it emerges that organizational learning is driven by different activities (Murray & Donegan, 2003), and these activities foster different levels of learning (Fiol & Lyles, 1985; Murray & Donegan, 2003). As innovation is associated with more sophisticated levels of learning (Murray & Donegan, 2003), the concept of innovation is then introduced and theorized upon, and it is posited that innovation involves a high degree of learning and iterative adaption (Blank, 2011; Kline & Rosenberg, 1986), pointing to the importance organizational learning when trying to become more innovative.

Only after organizational learning has been theorized upon in a broader sense and its connection with innovation been established can the facilitators of organizational learning, knowledge transfer and organizational culture, be discussed. Knowledge transfer is important as without a transfer of knowledge, knowledge remains individual (Argote, 2013). Knowledge is transferred differently, depending on if the knowledge is tacit or explicit (Nonaka & Takeuchi, 1995). Explicit knowledge is transferred through writings, spoken instructions, pictures, manuals, drawings whereas tacit knowledge is transferred through practice, social networks, observation and imitation (Nonaka & Takeuchi, 1995).

There exist certain impediments to knowledge transfer, and these can be either personal or organizational. One way of overcoming these obstacles to knowledge transfer is to have an organizational culture that helps the organization overcome these obstacles. As the "mechanisms" of knowledge transfer between individuals have been established, the focus

shifts towards how organizations embed knowledge into the organization and actually learn, and the theoretical framework posit that culture plays an important role in organizations' ability to learn (Alavi & Leidner, 2001; Leonard, 1995). There are different mechanisms for embedding culture within an organization, including criteria for rewards, criteria for recruitment and development, and formal statements of organizational philosophy (Schein, 1983).

3. Methodology

The two preceding chapters laid the foundation for this chapter as they theorized and discussed relevant and underlying theories for this research. The methodology chapter presents how the research was conducted and aims to show how issues such as validity of the empirical data and choice of respondents were addressed. Firstly, the research design will be presented and elaborated on in a funnel manner, starting on one side of the continuum with the wide epistemological considerations and sequentially move to more practical considerations. Logically, the actual process of which the research was conducted will follow. Lastly, this chapter will be concluded with a discussion on the quality of the research followed by the research's limitations.

3.1 Research approach and method

With the purpose of this study in mind, an interpretivist research approach was chosen as a guiding beacon in the research. The interpretive approach was deemed the most suitable as the aim of the study was to understand the respondents' subjective relation to- and view on how a large organization facilitates knowledge transfer within the organization in order to learn from innovation, and occurred naturally as the findings were not derived from the statistical analysis of quantitative data (Collis & Hussey, 2009; Corbin & Strauss, 1990). By taking an interpretive approach, it is implied that the researched phenomenon is a social phenomenon, which should be understood through the experience of those who work in the organization (Bryman & Bell, 2015).

According to Van Maanen, the complexity of social phenomena shouldn't be described nor understood with basic scientific law, but by adopting qualitative methods that aim to "*...describe, translate and otherwise come to terms with the meaning, not the frequency of certain more or less naturally occurring phenomena in the social world*" (1979: 9). This view is echoed by Bryman & Bell who states that a significant feature of qualitative research is the stress on "*…understanding the social world through an examination of the interpretation of that world by its participants*" (2015: 392). Thus, a qualitative research with a non-quantitative empirical data collection method but with qualitative data analysis was used.

3.2 Research design

A qualitative research approach is frequently used when researching highly subjective and complex fields of study in order to better understand and even define the subject at hands

(Wilson, 2013). However, within the overarching "qualitative research" there are multiple way of designing the actual research, potentially leading to different outcomes and results (Bryman & Bell, 2015). As path-dependency is a cornerstone of replicable academic writing, the choices made by the author concerning research design will be scrutinized and discussed in the section below.

Some common research designs often associated with a qualitative research approach are cross-sectional studies, longitudinal studies, case studies (Bryman & Bell, 2015). As longitudinal studies highlight variations over an extended period of time (Shadish, Cook, & Campbell, 2002), it was quickly deemed both unfeasible and inappropriate for the intended research considering the imposed time limitation. Cross-sectional studies on the other hand offer compelling advantages over longitudinal studies as cross-sectional studies are conducted at a single point in time (Bryman & Bell, 2015). Yet, it retains a pinch of academics' pervasive fascination of focusing on variation in order to understand the object of subject at hands, which is not the aim of this research nor aligned with the explorative nature of the interpretivist researcher. Thus, a cross-sectional study design was not used.

In regards to the case study design, Yin states that "*...the need for a case study arises out of the desire to understand complex social phenomena. A case study method allows investigators to retain the holistic and meaningful characteristics of real-life events*" (2003: 2). Recalling that the choice of an interpretivist approach with a qualitative method outlined in previous chapter was based on the inherently complex phenomena the research attempts to understand, Yin provides an alluring argument for the use of a case study design. However, while acknowledging case studies' usefulness, case studies are often criticized for lacking rigor, lacking scientific generalizability and requiring vast documentation (Tellis, 1997; Yin 2003). Nevertheless, a case study approach was used in the research in order to understand how a large organization facilitates knowledge transfer within the organization in order to learn from innovation, and the three areas of criticism will be addressed throughout this chapter.

3.2.1 Case study design

There exist different types of case studies, with which the researcher's objective has a corresponding type of case study that is more suitable (Yin, 2003). A case study can have the objective to describe (descriptive case study), explore (exploratory case study) or explain (explanatory case study) (Grünbaum, 2007). As the objective of the research was not to describe

characteristics (descriptive) nor to confirm theory (explanatory) but rather to explore a fairly unexplored academic territory, an explorative case study was deemed most suitable.

3.2.1.1 Analysis level of a case study

A frequently discussed concern when designing research as a case study is the level on which the analysis takes place (Grünbaum, 2007). This concern is both profound and real, and lead to many late nights and much frustration for the author of this research, because it shapes how the research subject is to be looked upon. Consequently, the research's paradigm stance was presented in the theoretical framework in order to make even the theoretical framework coherent with the level of analysis. Yet, the choice of "guiding principle" deserves some discussion in itself. According to Popova-Novak and Cseh (2015), there are four major competing paradigms in organizational learning research:

- Critical
- Functionalist
- Constructionist
- Post-modern

These are seen as "competing" as paradigms are considered to be non-compatibly different, and all research can be seen to be classified within one of the paradigms (Burrell & Morgan, 1979). Out of these four, the critical and post-modern paradigms play only peripheral roles in the field of organizational learning (Popova-Novak & Cseh, 2015), and will thus not be used in justifying the use of the constructivist paradigm.

By adhering to the constructivist paradigm of organizational learning, the analysis is firstly directed inwards, as opposed to the functionalistic view that organizational learning is a product of its external environment (Popova-Novak & Cseh, 2015). This, according to Popova-Novak and Cseh (2015), is potentially a weakness as it implies that organizations are affected by its environment, but organizational learning is not. The internal focus can be attributed to the constructivist paradigm's view of organizations as social structures, bounded together by shared traits such as culture, language and contextually embedded artifacts, predominantly viewing organizational knowledge as tacit and the learning process as facilitated by social interaction (Cook & Yanow, 1993). This, according to Huysman (1999), potentially makes researchers underestimate the impact of organizational structures on individuals. However, by viewing organizational learning almost as a product of social interaction, there is a natural connection

between the individual level and the organizational level of learning. Functionalists, on the other hand, emphasize structured hierarchies and clear processes for acquiring knowledge, predominantly focusing at the individual level as it equates individual learning with organizational learning (Popova-Novak & Cseh, 2015). This has been criticized as a simplification of reality as it does not explain how the individual is connected with the collective, and posit that the level of analysis to be homogenous across the different levels of analysis (Glynn, Lant, & Milliken, 1994).

In this research, the constructivist paradigm has been used as the focus of this research is how a large organization facilitates knowledge transfer within the organization in order to learn from innovation. Innovation has clear connections with knowledge, which indicates that facilitation of interaction to be the focus of studying organizational learning (Wang & Ahmed, 2003; see Table 1). However, the constructivist paradigm posits that facilitation of knowledge is not enough and that there needs to be a supra-individuals mechanism for turning individual level knowledge to organizational level knowledge, and thus the culture and social aspect cannot be omitted (Argote, 2013; Popova-Novak & Cseh, 2015; Nonaka & von Krogh, 2009)[1]. Consequently, the level of analysis is directed upwards towards the organizational level, which entails a more abstract level of analysis.

One might ponder why (and if) there is a need to discuss different views on a subject, and not just pick one rather arbitrarily. By recalling Burrell and Morgan's (1979) notion of competing paradigms, one can assume that by picking another paradigm as starting point, the outcome will differ as the views are not compatible and a paradigm consists of subsets of shared rules, standards and ontological and epistemological assumptions (Kuhn, 1996). Thus, its matter of path-dependency, and the discussion is an attempt to dissect the guiding cogitative framework of the author, or at least to provide a glimpse of it. However, this whole discussion is based on the notion that reality can only be viewed through models, and while not rejecting reality as an independent entity, Hawking and Mlodinow (2010) posit that intermediary models are the only vessels of an approximation of reality. Perhaps paradoxically, that is also an intermediary model in itself.

[1] Intuitively, this makes sense – communication without a culture of learning or a culture of learning without communication are probably both equally poor.

3.2.1.2 Case selection

A difficult task for researchers conducting case studies is the process of selecting the case to be studied, and then justify that particular decision. Reasons such as accessibility, time, money or expertise are frequently used to justify a specific case, but these ring hollow in the ears of most researchers (Seawright & Gerring, 2008). The focal organization in this study, CellMark, was not chosen because it is the average organizations providing great generalizability. Although the universal concerns of accessibility, time and money was applicable to the case selection as well, they were not a decisive factor. Instead, CellMark was chosen because it is (from the author's perspective) somewhat of an outlier, and the author has both access and special "local knowledge" about the organization from a current employment, which according to Fenno constitutes a powerful justification in itself (Fenno, 1986).

CellMark ought to be considered an outlier as it has decisively determined to become more innovative, and it can almost be traced back to a specific time (2015) when it conducted an audit of its innovation capabilities and saw that it had room for improvement in many of the measured capabilities. Since then, there has been a shift towards a more structured way of innovating. These kind of clear shifts are fairly unknown to the public, and although they provide an interesting case, are rarely studied as they are not known. Furthermore, the in-depth knowledge of the organization that comes from an employment allows for non-obvious inferences to be drawn, which might not be possible to make without local knowledge of the focal organization (Fenno, 1986). One should however be cautious when studying a case to which the researcher has a close connection with and/or are dependent upon.

3.3 Research process

The research process can, from a personal point of view, most accurately be described as an emotional rollercoaster, where moments of momentary joy has quickly been exchanged for the fear of not being able to complete the task, followed by periods of apathy and detachment. From an academic point of view however, the research process has been sequential yet iterative, and to a large extent nonlinear. However, it also depends on how one defines "research process" – is it the processes initiated with the start of writing of a master thesis as objectively measured in time, or is it the process of writing something similar to what is presented to the reader right now? In order to avoid exhausting all energy, both the readers' and the author's, the research process will be considered started when the topic was directed at organizational learning. With

this definition in mind, the research process becomes more sequential and will, for simplicity, be divided into phases.

3.3.1 Phase 1 - Preunderstanding

The initial phase consisted of the creation of a theoretical framework. This theoretical framework circled around innovation capabilities in general and how organizations turn knowledge into organizational learning, and the connection between the three topics. Albeit courageous, it was however deemed impossible to investigate due to the broadness of the focus, or perhaps lack of focus. This framework was refined to focus more on how organizations build organizational learning capabilities, but as the topic of organizational learning is ill-defined to start from, it was deemed difficult to explore ways of researching how companies work with something that researchers are having a problem defining. In hindsight, the challenge was perhaps that no paradigm was applied as a lens, making the whole venture unnecessary broad. Instead, focus shifted from a "how to increase" perspective to a more nuanced "how can", with a clearer focus on the process.

3.3.2 Phase 2 – Empirical data collection

Based on the theoretical framework, a set of interview questions was developed. These interview questions were shaped by the theoretical framework, yet with the purpose of answering the research question. The interviews were conducted and transcribed, but not analyzed, during a short period of time spanning one week.

3.3.3 Phase 3 – Refinement of theoretical framework

After the interviews were conducted, the theoretical framework was revisited and evaluated with the new knowledge from the empirical data in mind. No major part that would have render special mentioning or attention were changed.

3.3.4 Phase 4 – Empirical Analysis and Theoretical understanding

The empirical analysis was done with the refined theoretical framework in mind. This process of refining the theoretical framework while developing an empirical understanding over time gives the author a clearer picture of the subject as it allows the author's own reinterpretation as there is not an exclusive dependency on theory nor empirical data, and the author can alternate as preferred or needed (Alvesson & Sköldberg, 2008). This method of going back and forth is

in line with the abductive research approach of this analysis, which emphasizes the importance of both the empirical findings and the theoretical structure (ibid.), and is sometimes referred to as *systematic combining* (Dubois & Gadde, 2002). Systematic combining is, in essence, a "*...path-dependent process of combining efforts with the ultimate objective of matching theory and reality* [...] *Matching is, thus, about going back and forth between framework, data sources, and analysis*" (Dubois & Gadde, 2002: 554-555). Due to the path-dependency of the process, it is consequently difficult to distinguish patterns and describe the direction of the process.

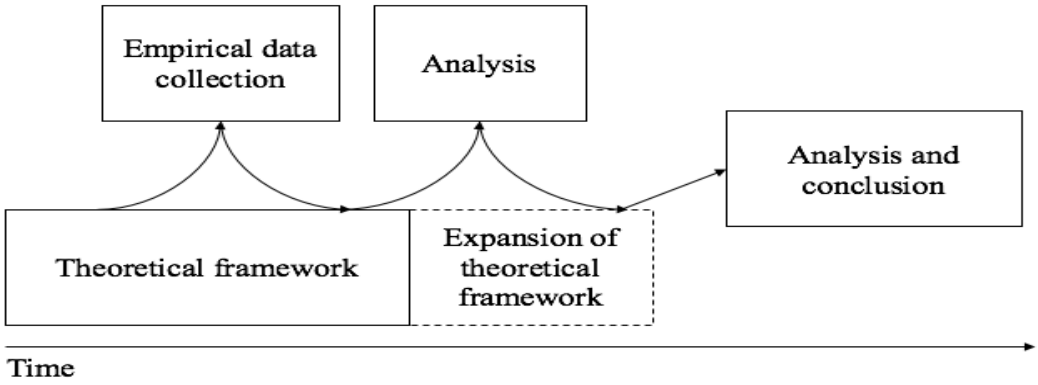
3.3.5 Phase 5 – Expansion of theoretical framework and empirical data presentation

Following the empirical analysis, it was evident that some aspects could not be explained by the theoretical framework at that time. Consequently, an additional section on culture (section 2.4) was added to the theoretical framework. Furthermore, at this stage it became evident that the empirical data needed some contextualization and an explanation in itself, thus a case description section was added to the empirical data.

3.3.6 Phase 6 – Analysis and conclusion

With an important addition to the theoretical framework added, a final analysis was conducted where the new "theoretical lens" was used. This did not drastically change the analysis, but added more nuances to subjects that were previously gray. Following this last analysis, conclusions were drawn and presented in its current form. The research process is summarized in Figure 1.

Figure 1 – The research process



Source: Author's own conceptualization

3.4 Method for empirical data collection

The empirical data was collected through interviews and a non-probability sampling method was applied (Kvale, 1996). The number of interviews was not decided arbitrarily, but based on the notion of knowledge saturation (Bertaux, 1981). Knowledge saturation means that the researcher continues to sample until the researcher's level of understanding is perceived to be enough. As one might assume, knowledge saturation is a disputed term, as it does involve the perception of the researcher, making the point of saturation difficult to distinguish (Guest, Bunce, & Johnson, 2006; Morse, 1995). In an attempt to address this very real issue, interviews were conducted until 1) the point where no new information appeared to materialize, 2) a pattern could be distinguished in the empirical data and 3) the data was enough to answer the research question, in line with Patton (2002). Due to both the limited time frame of the research process, and the common critique that interviews are time consuming (Adams, Khan, Raeside, & White, 2007), all interviews were held during one intense week.

3.4.1 Choice of sample

The sample in this study was not chosen randomly but selected by the author of this research in collaboration with the research object, CellMark. Thus, a certain restriction exists as the results of this research will only aid to the understanding of how a large organization facilitates knowledge transfer within the organization in order to learn from innovation, and generalization should be done carefully (Bryman & Bell, 2015). The sampling technique could best be described as a hybrid of *convenience sampling* (Blumberg, Cooper, & Schindler, 2011) and *purposive sampling* (Saunders, Lewis, & Thornhill, 2003), as the sample was chosen based on its convenient accessibility, that is, the respondents were known to the author and willing to take part in the research, and that the respondents were known to fulfill certain criteria. The following criteria was used in order to gauge whether the respondent was eligible to participate:

- The respondent should have been working for CellMark for at least 18 months
- The respondent should have a managerial role or equivalent.
- The respondent should have been actively involved in the changes that has occurred in CellMark, either directly (part of a new team, see Appendix B for detailed description), administratively (part of planning or execution) or both.

Table 6 summarizes the respondents according to key characteristics, without compromising the anonymity of the respondents.

Table 6 – Overview of respondents' profiles

RESPONDENT	WORKED >18 MONTH	POSITION	ROLE	DESCRIPTION
Respondent A	Yes	Senior Management/ Executive	Support	Actively part of more than one team
Respondent B	Yes	Management	Admin	Administratively part of at least one initiative
Respondent C	Yes	Management	Division	Actively part of one team
Respondent D	Yes	Senior Management/ Executive	Support	Administratively part of at least one initiative
Respondent E	Yes	Management	Division	Actively part of one team
Respondent F	Yes	Senior Management/ Executive	Admin	Administratively part of at least one initiative
Respondent G	Yes	Management	Division	Actively part of one team

Source: Author's own

Due to the fact that the research object has a relatively small organization at the office in Gothenburg, it is difficult to provide more details than what is presented in Table 6 without jeopardizing the promised anonymity. In this trade off, the integrity of the respondents will be prioritized.

The sample was based on convenience sampling (Blumberg, Cooper, & Schindler, 2011) and purposive sampling (Saunders, Lewis, & Thornhill, 2003), but the six respondents presented in Table 6 are not the only ones at CellMark to fulfil the criteria to eligibly participate in the

research. In total, nine individuals were deemed to fulfil the criteria, and these nine individuals were contacted in person and checked for both availability and interest in participating. Out of these nine, six were both available and interested in participating in the research.

3.4.2 Conducting the interviews

As previously mentioned, all empirical data in this research is primary data and was collected through personal interviews, which are guided conversations and ought to be regarded as qualitative interviews (Kvale, 1996). The interviews were of a semi-structured nature, meaning that a set of predetermined questions were used as a framework for the interview, but the respondents were allowed and even encouraged to almost freely navigate within this framework (Alvesson & Sköldberg, 2008; Blumberg, Cooper, & Schindler, 2011; Kvale, 1996;). Semi-structured interviews are popular as they allow the researcher some latitude of freedom in asking for clarification, follow up questions or in other ways interact with the respondent (Silverman, 2005). The obvious drawback of this interactionism in interviews is the subjective nature of the interactions, where the researcher's questions might lead the respondent astray from its original line of thought (Collis & Hussey, 2009).

3.4.3 Forming interview questions

The interview questions were formed and designed with the objective of answering the research question in mind, in line with Eriksson and Kovalainen (2008). The questions were not chosen arbitrarily, but created and shaped by the theoretical framework in a thematic manner, meaning that the overall themes from the theoretical framework were the foundation for the questions (Guest, 2012). Furthermore, the questions were intentionally designed as to invoke personal and detailed responses and chosen on the premise that they would give valuable insight to the research, as proscribed by Collis and Hussey (2009) in order to have an effective data collection. The questions were neutral in order to avoid presumptions and typologies, and reflective questions were frequently used to clarify what the respondents said (ibid.). The interview circled around 15 main questions that were asked to every respondent, and are presented in Appendix A. These main questions were then followed by predetermined questions and spontaneous questions and injunctions. A common concern when conducting interviews is the issue of "sensitive questions" (Groves & Kahn, 1979). This issue was addressed in two ways. Firstly, it was made clear that the study was not a behavioral study based on the respondents, but a study of a phenomena through a case study. Secondly, the respondents were offered the

option of anonymity to the extent possible considering the nature of a single case study in order to not marginalize respondents (Aquilino & LoSciuto, 1990).

3.4.4 Recording and transcription of interviews

In line with best practice in qualitative research, all interviews were recorded with the respondents' consensus (Poland, 2002). The advantage of recording is that the researcher can replay the interview multiple times, and can focus on the interview instead of taking notes at the same time (Bryman & Bell, 2015). On the other hand, the presence of an audio recorder might make the respondents uncomfortable and restrained, which might lead the respondents to become less cooperative (ibid.). However, as respondents were offered anonymity, this aspect should be of limited concern.

All interviews were transcribed within twelve hours from the interview, in order to minimize distortion, misunderstandings and misinterpretations and prevent the author's interpretation or loss of memory. Not only does the transcription facilitate a more nuanced analysis, but it also increases the reliability of the research as the transcriptions can be audited at a later stage in time (Poland, 2002). After the time-consuming tasks of transcribing the interviews and proof reading the transcriptions were completed, the analysis began, which is a process described in the next section.

3.5 Method for empirical data analysis

The empirical data was analyzed in a structured way, meaning that the analysis process was planned prior to the actual analysis (Collis & Hussey, 2009). Unlike the unstructured analysis, a structured analysis can be more efficient if managed well, but lacks the agility of an unstructured analysis (ibid.). As the analysis of qualitative data may be demanding and time consuming, the data was continuously reduced in order to make the analysis more effective. In accordance with Miles and Huberman's description of data reduction as *"... a form of data analysis that sharpens, sorts focuses, discards and reorganizes data*" (1994:11), the empirical data was reduced abductivly as the research progressed and after multiple refinements. In the analysis' final stage, a deductive approach was used as data deemed irrelevant to answer the research question was neglected and discarded. The reduction was theory driven, as key topics were defined before the analysis and the reduction of empirical data continued until the data was relevant only to the defined and set topics (Weber, 1990).

When the reduction was completed, the remaining empirical data was methodically and thoroughly studied and subsequently analyzed with an abductive reasoning method (Alvesson & Sköldberg, 2008). Due to the fact that the empirical data is to be considered non-quantifiable, and fact that semi-structured interviews were used resulting in variations in the respondents' answers, a thematic analysis was applied in order to understand broad themes and subtle patterns (Guest, MacQueen, & Namey, 2012). The empirical data consists of both plain answers and first order narratives as respondents shared experiences related to the research topic (Elliot, 2005). Based on the respondents' answers and interpreted through the above stated procedure, an analysis was done to understand how large organizations facilitate knowledge transfer within the organization in order to learn from innovation.

3.6 Research and Sources

Data used in this research stem only from primary research. In contrast to secondary data, which is data from already existing sources (Collis & Hussey, 2009), primary data is data collected solely for this research with an intention to reach the purpose of the study giving the research a higher validity (Blumberg, Cooper and Schindler, 2011). Collis and Hussey (2009) state that primary data is generally generated from an original source such as experiments, surveys or interviews, and the primary data that have been used in this case study was collected through interviews. The empirical data gathered from the conducted interviews enables an understanding of how a large organization facilitates knowledge transfer within the organization in order to learn from innovation, and does not primarily intend to contradict, challenge or prove the theoretical framework wrong. This is in line with the explorative nature of the research.

However, one issue frequently associated with the use of primary data is the big cost deriving from the actual data collection, since both time and financial resources are often needed (Saunders, Lewis, & Thornhill, 2003). This issue was addressed through a timely and well-planned timeframe for the collection of the empirical data, as prescribed by Saunders, Lewis, & Thornhill (2003).

Primary sources include reports in the original form that they were first presented (Collis and Hussey, 2009). In this research, primary sources such as original publications of theoretical

material stemming from empirical studies have been used. Secondary sources include interpretations of primary sources, for instance, publications such as journals and books that have been published again. Secondary sources have been used in this research, as they are often seen as time savers since they are readily available (Collis and Hussey, 2009).

The sources used in this research has primarily been selected through a systematic literature review, although sources have been added along the way as source from the systematic literature review led to other sources not in the review, deemed valuable for the research. The systematic literature review was primarily used in the initial stage of the theoretical framework, when establishing a foundation in the literature on organizational learning, as the subject is a fairly ill-defined topic (Matlay, 2000) and defining and mapping organizational learning in a consistent way is difficult (Probst & Buchel, 1997). According to Petticrew & Roberts (2006), it's in settings like the one described above that systematic literature reviews are most useful. Thus, in order to focus on the constructivist perspective and sharpen the review, a systematic literature review was conducted, with inclusion and exclusion criteria presented in Table 7.

Table 7 – Inclusion and exclusion criteria for systematic literature review

INCLUSION CRITERIA	EXCLUSION CRITERIA
Constructivist And Functionalist Paradigms In Organizational Learning	Critical and Post-modern paradigm in organizational learning
Definition And Critique Of Organizational Learning	Learning studied from a psychological and biological point of view
History Of Organizational Learning	Organizational learning studied with emphasize on external actors

Source: Author's own

All sources where then gauged by 1) its relevance as measured in time, 2) its relevance as measured by approval of academics within the field of organizational learning and 3) its relevance as measured by the generalizability of findings.

3.7 Quality of the research

Reliability, replication and validity are three prominent dimensions along which business and management research is evaluated on (Bryman and Bell, 2015). However, due to the often non-quantifiable nature of qualitative studies, and the fact that it has been noted by some qualitative researchers that the terms reliability and validity have connotations of measurement, researchers have proposed other criteria to assess research after (Bryman and Bell, 2015; Guba and Lincoln, 1994). Guba and Lincoln (1994) propose the criteria *trustworthiness* and *authenticity* in order to evaluate qualitative studies instead, which have less connotation with measurement, and instead capture the essence of qualitative research. *Trustworthiness* can be dissected into four distinct sub-criteria: credibility, transferability, dependability and confirmability (Bryman and Bell, 2015; Guba and Lincoln, 1994). *Authenticity* is to some extent present in dependability (Bryman and Bell, 2015), thus the following sections will focus on trustworthiness and its four sub-criteria.

3.7.1 Credibility

Credibility revolves around establishing that the results of the qualitative research are believable and credible from the participants in the research's perspective (Bryman and Bell, 2015). As the purpose of qualitative research is to describe or understand a phenomenon from the respondent's perspective, the respondents are consequently the only legitimate judge of the credibility of the results. With this humble insight in mind, the interviews were recorded for two purposes: to facilitate the analysis of the interviews and to make it possible for the respondents to upon request listen to the interviews for confirmation or clarification. However, none of the respondents exercised the right to listen to its individual interview.

3.7.2 Transferability

The degree of which the results of qualitative research can be generalized or transferred to other contexts or settings is referred to as a research's transferability. In this research, transferability has been addressed and enhanced by a thorough description of the research context and the research process of this thesis, as presented throughout Chapter 4 (Bryman and Bell, 2015). The conducted analysis, presented in Chapter 5, facilitates analytical generalizations yet is limited to the extent that the findings could be transferred to other studies of how large organizations facilitate knowledge transfer within the organization in order to learn from innovation (Bryman and Bell, 2015).

3.7.3 Dependability

Dependability concerns the ability to track and follow the development of the analytical process applied in order to understand the insights drawn from the analysis (Guba, 1981). This research mainly addresses dependability in the chapter covering the research process, which provides a thorough explanation of how this thesis was conducted and provides a detailed explanation of the methods used, including justification. The analysis process is explained in an attempt to guide the reader through the steps taken in the continuous analytical reasoning between theory and empirical data. The respondents' different professional positions within CellMark and the fact that the respondents are active in different functions increases the research's dependability as it facilitates triangulation of findings so that the results of the thesis are consistent with the empirical data (Bryman and Bell, 2015). Furthermore, as all interviews were recorded and transcribed, it allows for auditing of the research's authenticity, further increasing the dependability (ibid.).

3.7.4 Confirmability

A cornerstone in qualitative research is the assumption that each researcher brings a unique perspective – the research's confirmability refers to the degree of which the results could be confirmed or corroborated by others (Bryman and Bell, 2015). Furthermore, it concerns the topic of possible bias in the research, and the measures taken to decrease the possibility (Guba, 1981). In order to prevent biased empirical findings, answers from the six respondents (which were from different divisions and different functions) were triangulated, limiting the chance of biasing the empirical findings. Furthermore, enhancing the confirmability are the detailed description of the measures taken throughout the research, since the description allows trail auditing, which makes it possible to follow decisions and choices that have been made throughout the research (Shenton, 2004).

3.8 Limitations

The research is limited by the sampling method, yet relevant measure has been taken to overcome this limitation, and is presented below. The major limitation of this research relates to the sampling method as it is not statistically representative of the population (Saunders, Lewis, & Thornhill, 2009). Thus, one could argue that generalizing findings from this research to the population as a whole to be problematic. However, the intended findings are intended as

analytic generalizations as opposed to statistical generalizations, and analytic generalizations are by definition confined to the phenomenon under scrutiny (ibid.). Consequently, generalizations derived from this research may in fact have an applicability wider than the case being studied (Yin, 2003). However, as pointed out by (Maxwell, 2005), the relatively small number of respondents inhibits an understanding of the heterogeneity and diversity that may exist across multiple individuals, which may result in an exaggerated uniformity. This has been addressed by stressing that it's the *perception* of the respondents that's investigated, which shifts the focus from a quantitative to a qualitative sampling issue, which has been addressed by having respondents relevant for the researched phenomenon.

4. Empirical findings

This chapter presents empirical findings from the conducted interviews. However, in order to make sense of the empirical data, background information about the case will be provided in order to contextualize the respondents' answers. After the case background, respondents' view on innovation and how CellMark currently works with innovation will be presented in order to have a common ground to stand on. How knowledge is transferred within CellMark will then be presented, followed by the findings on culture and learning at CellMark.

4.1 Case background

As presented in the introductory chapter of this research, CellMark has long been a traditional trading house which main source of income has been commodity trading. However, unlike the world that has dramatically changed since 1984 (the year CellMark was founded), CellMark's trading model has remained much the same, although new business units have been added along the way. The world's increased connectivity and consequent flow of information and the easy of doing business globally have over time led to decreased margins for most traditional trading businesses, although CellMark's business in terms of volume has increased over the years. In order to counter the sector-wide decrease in margins, CellMark launched different initiatives during 2015-2016 aimed shaping CellMark to fit the needs and demands of the changing world it is active in.

Over the years, CellMark rapidly expanded its business through acquisitions in order to mitigate the decreasing profit margin and increase business, which turned it into a consortium of different businesses. Thus, CellMark went from a "family-style" company to a truly global trading house. However, in the process it lost some of its characteristics and perhaps even identity, and the knowledge that was previously "in the walls of the Gothenburg office" was not in all of the walls in all offices over the world. Consequently, in 2015 CellMark set out to create CellMark's Guiding Principles. As stated on CellMark's webpage, the Guiding Principles are the bedrock of all of CellMark's actions, and they are intended to provide guidance throughout the organization's life, irrespective of managerial or strategic changes (see Appendix C for complete list). The Guiding Principles of CellMark are centered around empowering, care, build, being supportive, develop and sustainable growth, and were developed and implemented during 2015-2016. The initiative with Guiding Principles were accompanied by a collaboration with Great Place to Work, a global survey-institute helping organizations on "building, sustaining, and recognizing high-trust, high-performing workplace cultures" (Great Place to Work, 2017). Together with Great Place to Work, CellMark conducts

an annual employee survey measuring CellMark as a work place. Workshops, presentations, seminars and other activities are done around the Guiding Principles, and they are frequently communicated both internally (intranet and posters) and externally (website and annual report).

During the conducted interviews, four fairly new initiatives were frequently brought up, and without further presentation, would render confusion to the reader. Thus, these initiatives will be presented next. **The Cross-Divisional Logistics** team is aimed at finding innovative logistics solutions and unifying the logistic departments of CellMark in order to find synergies and cut costs from the operations. The team consists of nine logistics experts from CellMark's European and American offices.

The Task Force for Business Development works with ideation and idea testing, and consists of twelve individuals from six different divisions and seven different countries. The purpose of the team is threefold; to find new opportunities through global idea generation, to minimize risk through hypothesis-based testing, and to free up time at divisional level by centralizing the ideation process. The methodology used to test ideas is partly based on the "Lean start-up" methodology, emphasizing fast-paced iterations in testing ideas. The team does not work with project execution or development.

Two teams, the **GOTMAN** (Gothenburg Middle Management synergy group) and
The Continental Synergy Group are aimed at finding synergies and exchange expertise within CellMark. The GOTMAN is a team consisting of all middle managers in the Gothenburg office, where best practices, challenges and information is shared and discussed. The Continental Synergy Group consist of mangers from the same division but from different offices in Europe, Asia and America who meet annually and discuss and share current operations, best practices, possible improvements and have workshops related to these topics.

4.2 Innovation at CellMark

Although the respondents' view of innovation differed, they shared similar traits. Answers ranged from broad answers such as "innovation is doing something you have not done before" (Respondent B) to more narrowly defined as "a new idea which is realized and made economically viable" (Respondent A). Overall, respondents appear to have a process oriented view of innovation, meaning that it is the action of doing something, as opposed to solely

relating innovation to a product or service. None of the respondents were unable to answer or give a definition of innovation, but all were perplexed when asked to provide a definition, and all but Respondent F acknowledged the difficulty of giving one definite definition of innovation. None of the respondents perceived innovation to be premiered within CellMark to any larger extent, although more emphasis has been put to innovation lately. Respondent A acknowledged that although innovation was premiered conceptually, it was perhaps not premiered in the economic sense, and stated that "not enough resources are allocated for innovation and it is supposed to be done on the side of all the daily work".

When asked how CellMark works with innovation, all respondents stated that there has been a shift from more individual and ad hoc innovation, mainly individuals pursuing entrepreneurial venture in parallel with current operations, to team based and more "structured" innovation. The utilization of teams and groups for innovation was perceived as something novel to CellMark, or at least to the extent that they are used today. The Cross-Divisional Logistics team, Task Force for Business Development, and Continental Synergy Groups were all mentioned as new ways of pursuing innovation within CellMark (see Appendix B for a more detailed description of the three). Two respondents stated that the shift towards team-based innovation work was a direct response to previous "projects where we invested both time and money, but results were sometimes poor and worse, we [the organization] didn't learn anything from the process because there was no mechanism for capturing knowledge" (Respondent F). According to two respondents, a recently launched innovation to become more efficient in the logistics operations was an almost direct effect of closer collaboration between the European and American logistics departments in the Cross-Divisional Logistics Group. It is however too early to evaluate the initiative in term of economic success, yet Respondent A stated that "closer collaboration between offices has been one of the key driver of progress within the project".

According to the respondents, much of the current innovation efforts are focused in teams, and the respondents perceived it to be a good way of learning as the gained knowledge did not stay with one single individual. Respondent D stated that "because there is a lack of innovation focus within the company, the diverse teams (The Cross-Divisional Logistics Group, Task Force for Business Development, and Continental Synergy groups) work as ambassadors for innovation and change within each division and office". Activities such as workshops, innovation jams (creative sessions where individuals collectively brainstorm) and case presentations were mentioned as ways that the teams can spread knowledge about their activities.

The respondents unanimously stated that the organization was in change. Respondent A pointed out that organizations are seldom completely static anyway, while acknowledging that CellMark was probably changing both faster and more than before. Respondent C stated that "CellMark is changing more now than it has done over my entire career [more than 5 years] at CellMark". All respondents were positive to the changes that had occurred and are currently occurring, but agreed that probably not everyone within the organization held the same favorable view of change, and that the changes have created tension within the organization. A reoccurring theme was that the past success of the organization was still being viewed upon as the benchmark, making some hesitant to change although there is a widespread consensus that the organization must change.

4.3 Knowledge transfer within CellMark

Most of the respondents stated that traditionally, there has been few ways to transfer knowledge within the organization. Respondent C stated that "when I started [more than 5 years ago], basically the only way we shared knowledge was through the weekly morning meetings with the whole office, where someone told everyone what that division or function had done. We mostly used emails, and divisions didn't really communicate. The knowledge transfer between countries was minimal". The intranet was frequently mentioned as a possible way of transferring knowledge, but the intranet was rarely used other than for notifications.

Most respondents perceived the organization to have changed not only the culture towards a more pro-knowledge sharing culture, but also structures to facilitate knowledge transfer. Previously, knowledge was mostly transferred ad hoc in informal meetings, such as yearly events or conferences, whereas now there are direct and structured ways of exchanging knowledge. The new structures to transfer knowledge were predominantly described as cross-divisional teams, in charge of solving "ill-defined" problems. As stated by Respondent F, "if you delegate a task with instructions on how to solve the task, the team will learn your way of solving a problem. If you give them the mandate to solve the problem themselves, the team will learn how to solve the problem themselves". Respondent A, C and G all stated that although the team they are part of have specific team members, people within CellMark are frequently brought in for specific tasks or to learn from the work of the teams. This was perhaps most

prevalent in the Task Force for Business Development, which according to Respondent F "is not intended to be a static group of people, but rather a dynamic team".

According to Respondent B, C and F, CellMark has for long been characterized by divisions pursuing their own goals and agendas, with limited integration and communication between the units. Respondent F attributed this to the fact that CellMark has acquired different companies over the years, and admitted that "[…] the integration process has perhaps not always been priority number one". Furthermore, Respondent F pointed out that the acquired companies sometimes differed both in scope of business and business culture from the traditional culture of CellMark.

Respondent A stated that "it was easier to transfer knowledge a couple of years ago when CellMark was smaller and operations were much simpler. Now that we are more people and operations are more diverse, it is increasingly difficult to communicate and transfer knowledge, as we don't interact with each other to the same extent". Furthermore, Respondent C stated that there has always been a good knowledge transfer process when, for example, a division gets a new employee or someone changes position, and that there is a culture of helping each other out. However, Respondent B contested that notion and stated that "CellMark does not have a culture of helping each other, but we are getting there".

CellMark's ISO documentation was frequently brought up as an example of how the organization makes sure that knowledge is kept and transferred within the organization, along with various manuals and business systems used to keep track of customer procedure and orders. These documentations are usually updated when something "goes wrong, so at least the next person doesn't have to do the same mistake" (Respondent C). However, both Respondent A and C acknowledged that some manuals were seldom used and contested their usability, especially in non-repetitive work.

4.4 The connection between culture and learning

All but Respondent B stated that CellMark has a culture of sharing knowledge and experience between individuals. The respondents who perceived CellMark to have a culture of sharing knowledge and experience between individuals stated that engagement was mostly driven from a cultural aspect. Respondent C and D attributed an increase in cultural awareness in CellMark

to the Guiding Principles and Great Place to Work survey. Furthermore, Respondent D speculated that the increased awareness has positively affected the culture of CellMark overall. According to Respondent G, the Guiding Principles were upon introduction perceived by some to be superfluous, as the Guiding Principles were "how me and my colleagues have always been thinking and acting" (Respondent G). When asked about the implications for the rest of the organization however, Respondent G stated that the introduction of the Guiding Principles probably helped to unify the organizational culture, yet was perhaps most beneficial for new employees who did not share the organization's values and culture from before.

All but Respondent B stated that CellMark was actively engaging employees to become more innovative, although it took different forms. The culture was attributed partly to the liberty of the individual employee within the firm, and partly to the role of the CEO Fredrik Anderson who, according to Respondent C, has "changed the way we perceive ourselves and our business, we are thinking more about the future and where we want to be". Two respondents attributed some of CellMark's innovative sprit to the fact that CellMark was founded by former employees of another "trading house" in Gothenburg, who quit and pursued a more entrepreneurial path which has created "a legacy of entrepreneurial drive in the company, its simply 'in the walls' and everyone knows about it without being told" (Respondent F). It has also always been ok to "speak one's mind" (Respondent A) as the organization has always been quite flat. Furthermore, all respondents perceived power to be widely distributed to employees. Respondent G speculated that the fast-paced nature of CellMark's traditional trading business was the main reason for power being delegated to most employees in the organization.

Two respondents questioned the effectiveness of CellMark's perceived culture of sharing knowledge, as knowledge was commonly only shared within respective division or even sub-group within the division. However, all respondents perceived a shift to have occurred since the start of the transformation of CellMark in 2015-2016, and that as a result there is more sharing and communication between divisions and functions. The reason for this was, according to Respondent B, that "there is now an awareness within the organization that we were not always so good at sharing experiences and knowledge, an awareness that was not present before which has lead us to change". Respondents who belong to the middle management perceived the change from before to be greater than top management.

All respondents stated that CellMark is actively working with bolstering a culture of sharing knowledge and learning. The respondents cited different initiatives, including the Great Place to Work survey and subsequent initiatives around work culture, CellMark's Guiding Principles that was launched in 2015-2016, and new teams that have been formed in order to increase knowledge transfer and foster more collaboration. However, one respondent (Respondent F) acknowledged the difficulty of creating a learning organization from a managerial point of view, as it is difficult to know whether someone has actually learnt or not. Furthermore, Respondent F stated that one way CellMark attempted to address this issue was by aligning the culture towards learning, partly by the Guiding Principles.

5. Analysis

With the purpose of this research in mind, the following chapter strives to address the research question and thereby increase the overall understanding of how a large organization facilitate knowledge transfer within the organization in order to learn from innovation by linking the gathered empirical data with the theoretical framework. Section 5.1 discusses the respondents' views on and perceptions of innovation and knowledge transfer, whereas section 5.2 shifts the focus towards teams' role in creating a learning organization. Lastly, section 5.3 discusses the knowledge-embedding mechanism of culture as a facilitator of learning.

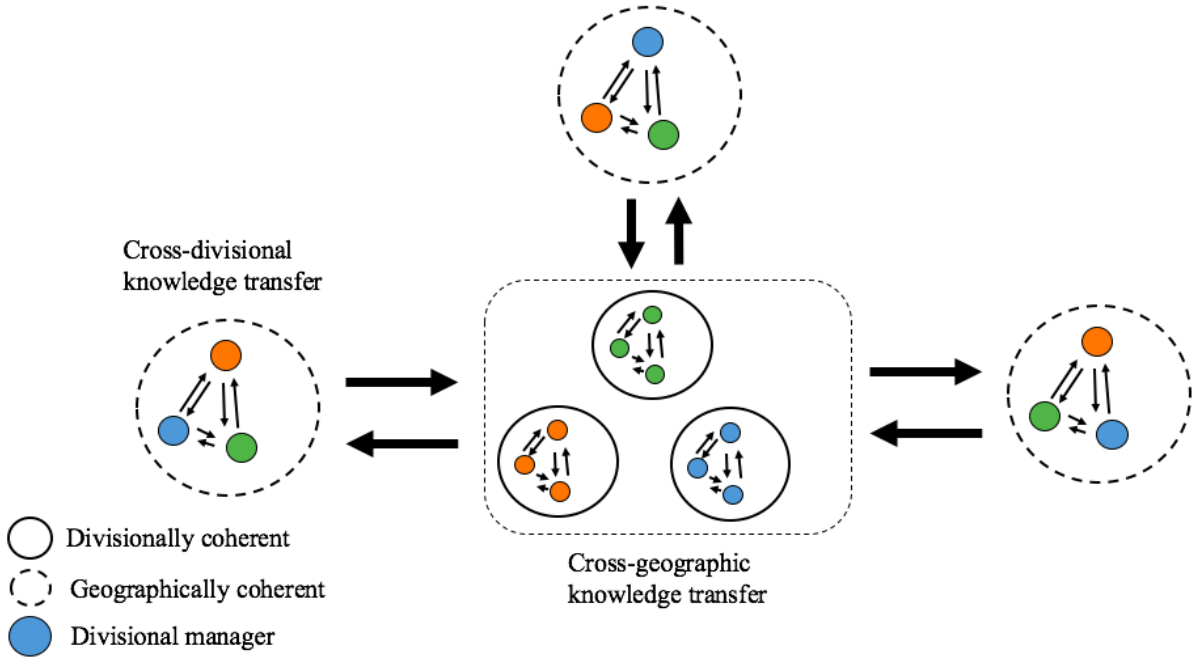
5.1 The perception of innovation and knowledge transfer within CellMark

Innovation was by all respondents viewed and perceived as doing something that is new to the organization, although exact wording differed. The respondents have an intra-organizational focus, meaning that innovation is perceived as doing something new within or to the organization, but not necessarily to the world. By having a similar view of innovation, it becomes possible to discuss innovation within the organization, creating a common language shared among employees. Plausibly, this facilitates knowledge transfer as it enables a common understanding of a phenomena (Fiol & Lyles, 1985; Schein, 1990). By having a common understanding however does not per say result in employees transfer and exchange knowledge; there needs to be a forum for exchanging knowledge and ideas, and opportunities for members of the organization to interact (Nonaka, 1994). CellMark has previously relied on documentation, such as ISO documentation, best practices and standard operating procedure (SOPs) documents in order to transfer knowledge, which might have actually impeded knowledge transfer (O'Dell & Grayson, 1998). Furthermore, this has been limited to divisional or even geographical best practices that have not been shared between divisions and offices, and some respondents questioned the usability of such documentation.

Documentations and SOPs are associated with lower-levels of learning, as they are associated with routines and there is little or no questioning why a certain action or procedure is prescribed (Fiol & Lyles, 1985; Murray & Donegan, 2003). If SOPs and best practices were to be shared more among divisions and offices, a higher level of learning could possibly be achieved as "competing" SOPs would force a discussion on which one to consider as the best, which challenges the current set of beliefs of the organization, consequently leading to a higher level of learning (Fiol & Lyles, 1985; Murray & Donegan, 2003). CellMark is actively working with

facilitating this in two ways. First, there are cross-divisional office meetings between middle managers of different divisions (GOTMAN), where best practices are shared and discussed. The outcome of these meetings is cross-divisional but geographically limited knowledge sharing. Secondly, there are the Continental Synergy Group consisting of managers belonging to the same division but from different geographical locations. The outcome of these meetings is geographically dispersed but divisionally limited knowledge transfer. Combining these two however, there is both a knowledge transfer between managers of different divisions but same geographical location, and between managers of the same division but different geographical locations, which creates a knowledge transfer between divisions and offices. The flow of knowledge is described in Figure 2.

Figure 2 – Knowledge transfer between divisions and offices



Source: Author's own

The knowledge transfer takes place in a social setting where challenges and issues are discussed and worked on during workshops, indicating a flow of tacit knowledge among participating managers (Nonaka, 1994). Furthermore, this mechanism of knowledge transfer help CellMark to overcome the "silo" hinder of knowledge transfer, where knowledge-transfer is confined within silos in the company (O'Dell & Grayson, 1998). As the knowledge transfer is an orchestrated process, knowledge sharing becomes part of work as opposed to an addition to the daily work (O'Dell & Grayson, 1998).

5.2 Teams' role in learning and transferring knowledge

The structure of knowledge transfer presented in Figure 2 is imposed upon the organization from top-management, meaning that knowledge transfer is an orchestrated process through teams. All respondents stated that teams have become more prevalent at CellMark, and the focus on teams is even stipulated one of the Guiding Principles: "We build strong, agile teams to align toward common goals […]". Since CellMark has previously not worked with teams to any greater extent, these are important first steps.

Two recent initiatives, the Task Force for Business Development and Cross-Divisional Logistics, were frequently brought up as example of how CellMark works with teams and innovation. These teams have delegated power, and mandate to be highly autonomous, which should facilitate higher-level learning within the teams (Fiol & Lyles, 1985; Murray & Donegan, 2003). Furthermore, these teams are knowledge intensive and centered on collective learning, which are all behavioral traits for dynamic-learning according to Murray and Donegan (2003). These teams however are not only important for the specific cause of which they are working with, but could be seen as role models for the organization.

The Task Force for Business Development and Cross-Divisional Logistics are both actively promoting their respective work, both online through CellMark's intranet and through various activities with members of the organization. Consequently, these new teams become ambassadors for innovation in their respective field. The teams are however not only ambassadors, and as stated by Respondent A, C and G, individuals from within the organization but not part of a specific team are frequently brought in to help and learn from the work of the teams. Taking the Task Force for Business Development as an example, the composition of individuals from different offices around the world and from different divisions could be intended as a way of spreading the knowledge about innovation and to the different offices represented in the team. This takes various forms, including workshops on innovation, innovation jams and case presentations. Thus, the Task Force for Business Development could be seen as an engine and facilitator of learning, as it tries to transform knowledge gained within the team about innovation to tacit knowledge through dynamic-driven learning (Nonaka, 1994; Murray & Donegan, 2003). To facilitate this transfer from teams, CellMark has worked with its culture to facilitate learning.

5.3 Culture – a facilitator for learning

In order to move from a structured knowledge-transfer between managers (as shown in Figure 2) or between team members to achieve actual organizational learning, the gained knowledge has to be embedded into more than just the structure of managers meeting and the subsequent meeting report, and learnt by the rest of the organization to become part of the culture (Drew & Smith, 1995; Nonaka, 1994; Popova-Novak & Cseh, 2015). One way that CellMark embeds knowledge and learn as an organization is through its Guiding Principles.

CellMark's Guiding Principles consists of five distinct values, which together are the foundation of all CellMark's actions (CellMark, 2016; see Appendix C for detailed description of the Guiding Principles). The Guiding Principles are intended to guide the organization by providing a framework for both actions and line of reasoning, consequently shaping the culture at CellMark (Schein, 1983). CellMark's Guiding Principles can be viewed as a formal statement of organizational philosophy, and is one way of creating a culture within an organization (Schein, 1983). As highlighted by Respondent F, it is however difficult for management to know whether the Guiding Principles have been accepted by the employees in the organization. What can be done however is to facilitate interaction and have an organizational culture which premiers learning, as intended and stipulated in the Guiding Principles.

As noted by Respondent G, the Guiding Principles have possibly helped unify the organization around a common set of principles. However, it is not clear whether this has helped the organization as a whole to feel more as one organization, as opposed to individuals associate themselves with their specific division or unit, which hampers knowledge transfer (Burgess, 2005). The combination of Guiding Principles and a "cultural awareness" (Respondent B) could however help CellMark become more of a homogenous organization in terms of culture, which is deemed important as one way of enhancing learning within an organization (Schein, 1996). Furthermore, by having one shared culture within the organization, CellMark might be able to standardize and align the cogitative behavior of the members of the organization and how they interpret the world around them (Mahler, 1997), and shift it towards one that emphasizes learning.

6. Conclusion

The first section of the conclusive chapter outlines the main findings of this study on how a large organization facilitates knowledge transfer within the organization in order to learn from innovation. Once the research's findings have been presented, suggestions for future research are presented. Finally, as a salutation to the very real world that this research has taken place in, implications for practitioners are presented to highlight the practical usage of the findings.

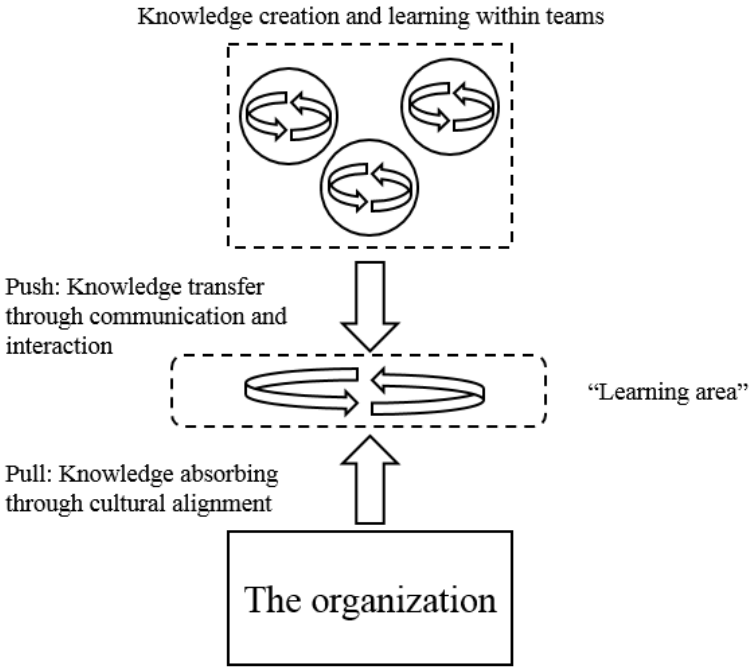
6.1 Findings of the research

The research points to the usage of teams and cultural alignment as two methods that a large organization can use to facilitate knowledge transfer within the organization in order to learn from innovation. The analysis shows that teams can be utilized as engines of learning, as they provide a forum for knowledge transfer and are more easily managed than complex organizations. The teams should be centered on collective learning, have delegated power and mandate to be highly autonomous, which should facilitate higher-level learning. Team members can on their part be perceived as ambassadors for innovation, and can act as a link between members of the organization and innovation. Through engagement with members of the organization, the team members can transfer knowledge gained within the team from working with innovation to the rest of the organization. However, the analysis shows that without a culture that promotes learning, the knowledge gained by teams may not trickle down (or up) in the organization. Thus, large organizations can attempt to create a learning culture through formal statements of organizational philosophy, which aligns the culture towards teams and learning. By aligning the culture of the organization towards teams and learning through formal statements of organizational philosophy, there is an over-arching force which pulls the rest of the organization towards the teams, who are working with innovation. Plausibly, this could be described as changing the cogitative framework of the organization towards teams and learning.

From the analysis, a system on how to learn from innovation has emerged and can be described as a push-pull mechanism, conceptualized in Figure 3. As described above, teams work with innovation and generate higher-level learning within the team. From the team perspective, the teams *push* knowledge gained from innovation to the organization through communication and interaction. The *pull* is created through a culture that emphasizes learning and engagement, created through formal statements of organizational philosophy, which encourages the flow of knowledge and learning. Plausibly, underlying factor of the pull mechanism, namely the

cultural alignment that encourages learning and engagement, is also prevalent in the pull mechanism in the form of a culture that emphasizes communication and interaction. This points to the importance of aligning the organizational culture towards one that promotes both communication and interaction as well as learning and engagement. By forming the organization around one shared culture and by making the culture more homogenous through formal statements of organizational philosophy, organizations can overcome the impediment of having different cultures not communicating with each other as there is only one shared culture.

Figure 3 – Conceptualization of push/pull mechanism for learning from innovation



Source: Author's own conceptualization

Conclusively, teams learn from working with innovation, and a mechanism for transferring the gained knowledge can be described as a push/pull mechanism. The push/pull mechanism emphasizes a holistic view of how organizations can learn from innovation. The "Learning area" in Figure 3 denotes a notion of learning as a product of two forces, the combination of a knowledge push from teams through communication and interaction and an absorbent pull from the organization through a culture that promotes learning and engagement. Consequently, by reinforcing the teams' push capabilities and the organization's absorbent pull capability, large organizations can facilitate knowledge transfer within the organization in order to learn from innovation.

6.2 Suggestions for further research

From the research, several contributions can be delineated. These contributions can broadly be divided into two parts: theoretical contributions and managerial contributions. First of all, the research has contributed to an increase in the overall understanding of how large organizations facilitate knowledge transfer within the organization in order to learn from innovation. By holistically viewing innovation as an opportunity for an organization to learn, the focus is shifted from the actual innovation process of an organization to the nexus where innovation and learning meets. In its current explorative mode, the research has focused on the intention of the organization, as it is too early to evaluate the actual outcome of the initiatives and cultural work described throughout this research. Thus, a practical suggestion for future research would be to revisit the work done in this research in some years, and evaluate the outcome of the work described above. Have teams acted as an engine for innovation? Has the cultural alignment facilitated learning from teams? Has the organization become more unified? These are three questions that, through perhaps a longitudinal research design, could be investigated and yield valuable insights. Furthermore, the "Learning area" pictured in Figure 3 could be further investigated and studied, which could yield valuable and practical insight in what practices that could be included in the facilitation.

For managers, this research suggests that organizations can align the organizational culture to facilitate transfer knowledge within the organization in order to become more innovative, which is a hands-on contribution to managers struggling with organizational learning and how to become more innovative. As described in this research methodology (Chapter 3), a chapter on culture was added to the theoretical framework as it appeared to play an important role for organizational learning to occur. In this research, the samples were all managers and only the *perceived* culture of the organization could be discussed. It would however yield interesting insight to study the culture of the organization from the perspective of the rest of the organization, to understand whether the Guiding Principles have played its intended role. Possibly, the culture could be studied by conducting action research, where cultural aspects such as symbols, stories and interactions could be studied first hand.

6.3 Implications for practitioners

The increased understanding of how large organizations facilitate knowledge transfer within the organization in order to learn from innovation has not only increased the academic

understanding of a rather unexplored field, but also contributed with some implications for practitioners. By understanding how large organizations work with teams and cultural alignment to facilitate learning, practitioners who want their organization to become more innovative can apply a similar methodology to induce learning into the organization. Furthermore, the mechanism for knowledge transfer between divisions and offices presented in this research can be applied in other contexts in order to facilitate knowledge transfer in global organizations.

6.3.1 Implications for CellMark

CellMark, as the focal organization of the study, render some extra advice as a small gesture of appreciation. CellMark is already actively working with shaping the organizational culture, both through the Great Place to Work Survey and Guiding Principles, which may help the organization learn more effectively. However, just like the knowledge transfer depicted in Figure 2 is an orchestrated process, the way teams communicate and interacts could be made more structured. Based on the research, the communication between teams and the organization appears to be an *ad hoc* process, and perhaps more training and effective tools could solidify the learning. By viewing learning as a holistic process, perhaps with Figure 3 in mind, it becomes important to not only focus on culture, but also the transfer of knowledge from the engines of learning – teams.

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Appendix

A Interview Questions

Culture

1. Do you have a culture of sharing knowledge and experience within the organization?
2. Have you actively worked with creating this culture?
3. Are teams and working in group a method you use in the organization?
4. Do you perceive power to be delegated to employees?
5. Do you feel that the organization is in change?
6. How is change looked upon by the rest of the organization?

Innovation

7. What's your definition of innovation?
8. Are you actively working with engaging employees to become more innovative?
9. Do you feel that innovation is premiered within the organization?
10. Why it is that innovation is/isn't premiered?
11. Can you describe the organization's method of innovation/innovating efforts?

Knowledge transfer

12. How do you make sure that knowledge that you have gained is transferred to the organization?
13. How do you make sure knowledge from other people in the organization is transferred to the organization?
14. What kind of structures do you have to facilitate knowledge transfer?
15. How do you make sure you do not make the same mistake twice?

B Description of the new project teams within CellMark

Cross-Divisional Logistics

The Cross-Divisional Logistics project is aimed at finding innovative logistics solutions and unifying the logistic departments of CellMark in order to find synergies and cut costs from the operations. The team consists of nine logistics experts from CellMark's European and American offices.

Task Force for Business Development

The Task Force for Business Development works with ideation and idea testing, and consists of twelve individuals from different divisions and different countries. The purpose of the task force is threefold; to find new opportunities through global idea generation, to minimize risk through hypothesis-based testing, and to free up time at divisional level by centralizing the

ideation process. The methodology used to test ideas is partly based on the "Lean start-up" methodology, emphasizing fast-paced iterations in testing ideas. The team does not work with project execution or development.

GOTMAN and Continental Synergy Group

The **GOTMAN** (Gothenburg Middle management synergy group) and **The Continental Synergy Group** are aimed at finding synergies and exchange expertise within CellMark. The GOTMAN is a team consisting of all middle managers in the Gothenburg office, where best practices, challenges and information is shared and discussed. The Continental Synergy Group consist of mangers from the same division but from different offices in Europe, Asia and America who meet annually and discuss and share current operations, best practices, possible improvements and have workshops related to these topics.

C CellMark's Guiding Principles

"CellMark's Guiding Principles are the bedrock of all our actions. Integrity is the foundation of our relationships, with each other and with our business partners. Additionally:

- We empower each other to be creative and decisive. We are a company of global entrepreneurs; we generate ideas and welcome change.
- We care about the welfare, health and well-being of our people, our business partners, and the communities where we are present.
- We build strong, agile teams to align toward common goals. We develop long-lasting, relationships while having fun.
- We are supportive, promote open dialogues and treat each other with respect. We celebrate our accomplishments and learn from our experiences.
- We develop tools, training and guardrails to facilitate sustainable growth."

Extract from CellMark's website (CellMark, 2016)