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Exploring Knowledge Implementation in Project Teams

Insights from a Qualitative Case Study in a High-Tech Industry MNC

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Abstract

Existing literature underscores the significance of knowledge management (KM) in organisations for enhancing performance and gaining competitive advantages. Despite scholars acknowledging that knowledge implementation activities realise the value of KM, little is known of how these activities can be affected through organisational structures. With an increasing amount of assessing knowledge-related activities in project teams, the need for uncovering the relationship between project teams and knowledge implementation should no longer be neglected. Yet, there is limited research on how project teams affect knowledge implementation. By conducting a qualitative case study within a high-tech industry MNC, this study illuminates knowledge implementation within project teams and uncovers how this organisational structure affects knowledge implementation activities. This study identified 15 determinants of how project teams affect knowledge implementation, sorted in three groups: individual, team, and socialisation determinants. The analysis of these findings showed that a holistic assessment of these groups is necessary to understand the interplay between project team context and knowledge implementation. In line with existing KM theory, this study found that knowledge implementation is directly affected by determinants that reside within the individual. This study identified intrinsic motivation, time allocation, prioritisation and the ability to align new knowledge with existing operations as directly affecting knowledge implementation. This study develops existing literature by finding that synergies within teams and between teams affect these individual determinants, therefore having indirect effects on knowledge implementation. This implies that managers need to account for the influence of project teams, if KM strategies are expected to increase performance.

Key Words: Knowledge Implementation, Knowledge Management, Project Teams, Knowledge, Absorptive Capacity, Case Study, Multinational Corporation

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List of Abbreviations

KM	Knowledge Management
MNC	Multinational Corporation
KT	Knowledge Transfer
KS	Knowledge Sharing
DCAP	Disseminative Capacity
ACAP	Absorptive Capacity
PACAP	Potential Absorptive Capacity
RACAP	Realised Absorptive Capacity
OL	Organisational Learning

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1 Introduction

1.1 Background

In recent years and decades, researchers as well as managers have increasingly acknowledged the significance of successful *knowledge management* (KM) within organisations (Liao, Chen, Hu, Chung, & Yang 2017; Ahmad & Karim 2019). This emphasis on KM has been further strengthened as multinational corporations (MNCs) have recognized the critical role of managing, transferring and coordinating knowledge for creating a competitive advantage (Minbaeva, Pedersen, Björkman, Fey & Park 2003; Balle, Oliveira & Marques Curado 2020). Due to the growing emphasis on creating and exploiting firm-specific capabilities within organisations, KM has become a strategic activity that enhances the competitiveness of the organisation (Tan, Su, Mahoney & Kor 2020; Ferreira, Mueller & Papa 2020; Riege 2005; Volberda, Foss & Lyles 2010).

KM can be characterised as a concept of immense complexity and richness, whose origins can be traced back to the 1960s (Gaviria-Marin, Merigó & Baier-Fuentes 2019). The concept then grew exponentially in the 1990s with the publication of literature by Kogut and Zander (1992), Nonaka (1994) and Grant's (1996a; 1996b) theory of the knowledge-based view which emphasises knowledge as a strategic resource in organisations. Until today, the concept of KM has spread over various disciplines (Inkinen 2016), including organisational management, computer science, social science, and medicine (Sroka, Cygler & Gajdzik 2014). Consequently, multiple definitions and perspectives on KM have emerged over time. It is therefore necessary to clearly define key concepts, to create a mutual understanding.

From an organisational management standpoint, KM is usually understood from a process perspective (Mudambi 2002; Lin 2007; Alavi & Leidner 2001; Balle, Oliveira & Marques Curado 2020). In that sense, Lin (2007) defines KM as "strategies and processes of acquiring, converting, applying, and protecting knowledge to improve firm's competitiveness" (Lin 2007, p. 1). Accordingly, Alavi and Leidner (2001) argue that KM consists of four processes, being the creation of knowledge, storing and retrieving knowledge, transferring knowledge, and applying knowledge. Balle, Oliveira and Marques Curado (2020) apply a very similar description to KM and account for creation, retaining, transfer, and use of knowledge as being the core parts of KM. Based on the different definitions of KM in the literature (Mudambi 2002; Lin 2007; Alavi & Leidner 2001; Balle, Oliviera & Marques Curado 2020), this study defines KM as a comprehensive and multi-tiered approach adopted by an organisation to gain a competitive edge through strategic

creation, dissemination, absorption, and implementation of knowledge. Arguably the most studied field of these processes is that of *knowledge transfer* or *knowledge sharing*. It is an integral part of KM and spans over various actors, processes, mechanisms, and dimensions (Ahmad & Karim 2019; Wang & Noe 2010). In line with the general problem of a lacking consensus on terminology and vocabulary that is used in KM theory, knowledge transfer (KT) and knowledge sharing (KS) are often used interchangeably and lack clear distinction from each other. This thesis adapts the elaboration by Wang and Noe (2010), emphasising that sharing primarily involves the sender providing knowledge to others, while transfer implies both sending and receiving units. Part of this transfer is thus the distribution of knowledge as well as the acquisition and implementation of it. An important distinction is often made of KT between different organisations and KT within organisations. Inter-organisational KT can, for example, take place between firms and universities (Siegel, Waldmann, Atwater & Link 2003; Cassiman & Veugelers 2006) or between different firms (Easterby-Smith, Lyles & Tsang 2008). Intra-organisational KT describes the transfer of knowledge between different units of a firm (Argote, Ingram, Levine & Moreland 2000), for example between subsidiaries (Foss & Pedersen 2002; Minbaeva 2007) or intra-organisational networks (Sroka, Cygler & Gajdzik 2014; Tang 2011). KT as part of KM in itself can therefore be described as a multidimensional concept that can be applied to various levels of the organisational context, both inter- and intra-organisationally.

Intra-organisational KT involves the sender, receiver, the knowledge being transferred and the organisational context in which the transfer occurs. These components collectively determine to what extent KT takes place (Minbaeva 2007). The sender and receiver's role in this context has received considerable attention in the literature, including the sender's disseminative capacity (DCAP) and the receiver's absorptive capacity (ACAP). Together, DCAP and ACAP are critical for realising the benefits of KM and gaining a competitive advantage (Minbaeva 2007; Gupta & Govindarajan 2000; Tang 2011; Lowik, Kraaijenbrink & Groen 2016; Mariano & Walter 2015; Minbaeva et al. 2003). DCAP captures the sender's ability and motivation to effectively transfer knowledge (Minbaeva 2007). The concept of ACAP has been introduced by Cohen and Levinthal (1990) who view ACAP as "the ability of a firm to recognize the value of new, external information, assimilate it, and apply it to commercial ends" (Cohen & Levinthal 1990, p. 128). Zahra and George (2002) have further developed the concept, categorising ACAP into the four dimensions of acquisition, assimilation, transformation, and exploitation. However, scholars acknowledged that the final

dimension, exploitation of knowledge, is the critical key for value creation through KM (Alavi & Tiwana 2002; Minbaeva et al. 2003).

Organisations are adopting a new approach to KM as they increasingly structure "knowledge-intensive work" within project teams (Mueller 2014, p. 190). Teams are groups of individuals working together towards shared objectives through assigned roles (Cohen & Bailey 1997). They promote interdependence, shared responsibility, and offer advantages such as reduced supervision costs, increased employee commitment, and a favourable environment for creativity and innovation (Curado, Oliveira, Maçada & Nodari 2017). Du Plessis and Hoole (2006) argue that project-based work is incorporated into organisations to create a competitive advantage. In addition, the authors argue that successful project teams are created when there is a supportive organisational culture. From a KM perspective, this setting puts additional emphasis on the engagement between teams that represent either sending or receiving units as they contribute to the process by either disseminating or absorbing knowledge with the intention to contribute to the creation of firm-specific capabilities and competitive advantage. Hence, this argues for the importance of viewing the exchange of knowledge from a KT perspective to address both the DCAP of the sending unit and the ACAP of the receiving unit. With the ambition to create unique capabilities to the organisation, the intention with KT is to contribute to the exploitation or implementation of knowledge to create *organisational learning (OL)*, including new routines and processes that are crucial to the creation of competitive advantage (Argote & Miron-Spektor 2011, King 2009).

1.2 Problem Discussion

Although the importance of KM has been widely acknowledged, numerous firms continue to encounter challenges in realising its benefits, primarily due to inadequate realisation of its value, which involves the implementation of transferred knowledge into routines and processes at the receiving side to improve business performance (Ahmad & Karim 2019; Gaviria-Marin, Merigó & Baier-Fuentes 2019; Jonsson 2012, Inkinen 2016). Several studies have been conducted to investigate what determinants influence the transfer of knowledge from one unit to another, resulting in diverse findings and approaches, such as motivation and transmission channels (Gupta & Govindarajan 2000; Pedersen, Petersen & Sharma 2003), ability (Minbaeva et al. 2003), or status, personal ties, and proximity (Jasimuddin 2007).

However, researchers have paid significantly less attention to how organisations implement the knowledge once it has been transferred (Ahmad & Karim 2019). The implementation activity includes that the knowledge is just not acquired but also applied accordingly by the receiving unit into their operations, routines, and processes. Adapting the conceptualisation of ACAP by Zahra and George (2002), it can be seen as a subsequent step of successful knowledge transfer. The authors further argue that it is decisive for organisational learning processes and business performance that knowledge is not only transferred to the recipient, but also implemented to a sufficient extent (Selivanovskikh, Latukha, Mitskevich & Pitinov 2020; Lowik, Kraaijenbrink & Groen 2016). This implies that the implementation of knowledge plays an important role in successful KM strategies of organisations (Alavi & Tiwana 2002) and emphasises further academic attention to contribute to the literature on knowledge management. Implementation of acquired knowledge into the receiver's operations is further seen as the critical element of knowledge transfer, as there is no value in knowledge transfer per se if the knowledge is not implemented (Minbaeva et al. 2003).

Furthermore, researchers rarely focus on a team-level perspective when studying KM, even though the importance of knowledge-intensive teams is widely recognised (Lowik, Kraaijenbrink & Groen 2016; Mueller 2014). Teams are growing in importance in organisations (Sung & Choi 2012), and particularly the organisational structure of project teams (Mueller 2014). Although project teams have grown rapidly, organisations face challenges managing such constellations . The challenges include the situation in which an employee is only involved part-time in a project team, since they still have their line organisation, and a lack of organisational competence and culture that support such constellations (Du Plessis & Hoole, 2006).

Furthermore, studies on knowledge management in the context of teams have mainly focused on individual team studies. This implies that existing research focuses on how one team enables knowledge sharing of individuals, or that scholars have used teams as a bounded space to conduct a study, but rarely studied implementation of knowledge that has been acquired from other units. Several studies have focused on the creation of knowledge within teams (Curado, Oliveira, Maçada & Nodari 2017) or on knowledge sharing within teams (Wang & Noe 2010), there has, however, been less attention on the implementation of knowledge that comes from outside a team, despite a wide awareness of its contribution to value realisation of knowledge management (Alavi & Tiwana 2002).

This leaves a gap for further research that this study aims to fill. For once, there has so far been limited research on knowledge transfer between teams (Mueller 2014). Secondly, if studies focus on knowledge transfer between teams, there is seldomly a focus on the knowledge implementation activities. To address this gap, this study aims to explore the role of project teams as knowledge receivers and how this affects knowledge implementation. Furthermore, it is essential to recognise that knowledge implementation plays a crucial role in value creation, as emphasised by previous research (Alavi & Tiwana, 2002; Wang & Noe, 2010) and it should receive appropriate attention in the research field.

Besides these contextual problematisations of the topic, there are also methodological issues that need to be taken into consideration. The overrepresentation of quantitative studies in the field of KM poses significant limitations to detailed studies of the organisational context in which KM takes place (Wang & Noe 2010). It further restricts new findings to contribute to the comprehension of the determinants that are crucial for the efficacious conversion of KM into business outcomes. Despite the extensive research on KM in the business context, the methodological gap of qualitative, rich-in-detail studies of the phenomenon results in an absence of understanding why some knowledge related activities provide the aspired outcome while others fail (Ahmad & Karim 2019). This transformation unclarity of how to realise the value for businesses of transferred knowledge can be drawn back to the concept of ACAP, justifying the qualitative approach that is used to investigate this phenomenon. Riege (2005) further emphasises that best practices of KM that can be generalised barely exist. It is therefore of significant importance that firms evaluate their individual KM and respective measures, mechanisms, and tools.

1.3 Purpose and Research Question

The purpose of this study is to add to existing literature and fill contextual and methodological gaps by investigating how project teams affect knowledge implementation in an MNC. To address these aspects, this paper investigates qualitatively how members of project teams experience their knowledge implementation activities in these teams, identifies the determinants that influence these activities and examines their relationship with knowledge implementation. Based on this purpose and previous elaborations, the following research question is presented and will be further investigated in this study:

RQ: *How are project teams affecting knowledge implementation in an MNC?*

1.4 Delimitations

The boundaries of the research are defined by a number of delimitations made in this study. These boundaries are shaped by the theoretical framework, the research question, and the choice of the case study. Firstly, in order to define a clear focus area and remain within the disciplinary field of this study, delimitations have been made on the scope of theory on KM to organisational and business studies, thus excluding other disciplines such as medicine and computer science. Secondly, with the aim to explore and analyse how project teams affect implementation of knowledge that has been received from another unit, the analysis of the sending unit will be limited to an extent to allow for a comprehensive and rich-in-detail investigation of the receiver's perspectives. Finally, this study is conducted in a qualitative approach by conducting a case study in an MNC, using interviews and observation practices to receive the empirical data. As a result, this study aims to deliver context-dependent insights and findings specifically applicable to the unit under study and therefore only generalizable to a limited extent.

1.5 Disposition

Chapter one introduces the research topic of knowledge implementation in project teams as a part of KM and provides a problem discussion that outlines theoretical and methodological gaps as well as determinants for implementation in the practical context. It continues with the purpose and research questions of this study as well as associated delimitations. The second chapter reviews existing literature on teams in organisations and KM. The chapter further elaborates on related literature and concepts of KM, including knowledge transfer, absorptive capacity and organisational learning to show the interconnectedness and motivate their importance for the research. As a conclusion, a conceptual model for knowledge implementation in project teams is presented. The elaborations on the underlying methodology of this study in chapter three clarify the research process of this study, motivate why the chosen approach of qualitative research has been selected and introduce the sample and the method of data collection. The fourth chapter contains the empirical findings which are presented based on a thematic networks analysis. The structured presentation relates to the conceptual model presented in chapter two. Reflecting the structure from the empirical findings, chapter five analyses the determinants found in the empirical data and how these affect knowledge implementation in project teams. Further, a revised conceptual model is presented, integrating the new findings. The study is concluded in chapter six with the answer

to the research question, theoretical contributions, managerial implementations and the possibilities for further studies of this topic.

2 Theoretical Framework

This chapter is divided into a review of literature on project teams in organisations, knowledge management and related concepts, that shape the theoretical framework of this study. To conclude the theoretical framework, a conceptual model is presented that captures relevant theory and concepts for the context of this study.

2.1 Teams in Organisations

A ‘team’ refers to a group of two or more individuals who engage in adaptive and dynamic interaction through specific roles to achieve shared and valued objectives. The team’s members are interdependent in their tasks and share the responsibility for the performance outcome (Cohen & Bailey 1997). Many companies use this approach to organise their employees. The advantages of teamwork include reduced supervision expenses, increased employee commitment, and a better environment for creativity and innovation (Curado, Oliveira, Maçada & Nodari 2017). Teams are also seen as quick response and adaptation units to the dynamics of business (Waller 1999). The organisational approach of using teams is based on the advantage that teams can accomplish tasks in a more time efficient manner than individual employees or, if more than one employee participates in tasks, than several employees working in a sequential process order (Edmondson & Nembhard 2009). In times of exponentially increasing creation of new knowledge, especially in the field of new technologies and data management, collaboration by specialists is more and more required to keep up with knowledge evolution and develop the firm (Edmondson & Nembhard 2009). Scholars have acknowledged the importance of teams for organisational learning processes and have experienced an increasing use of teams in organisations for knowledge-related activities (Cohen & Bailey 1997; Huang & Newell 2003; Salas, Cooke & Rosen 2008; Sung & Choi 2012). Such an organisational design allows corporations to reduce the need of complex organisational restructuring while benefiting from collective expertise to develop solutions to organisational challenges. Teams are used for a wide range of activities, particularly when organisations are facing complex challenges (Salas, Cooke & Rosen 2008), including knowledge management (Huang & Newell 2003). The effectiveness of teams can be measured on different levels. Cohen and Bailey (1997) review literature on team effectiveness on four different levels: individual, group, business unit, and organisational level. Such a perspective is important, as the effectiveness of teams is interrelated between these different levels, meaning that the different levels can interfere with each other and

should therefore not be assessed in isolation. For example, if the team is effective on a group-level, it might not automatically mean that it is effective on a business unit level (Cohen & Bailey 1997).

Different themes of studies on teams in organisations focused on different aspects of teams and demonstrate the importance of assessing both individual and team characteristics.. One stream of research focuses on Team Composition, including diversity and size (Cohen & Bailey 1997). Bell, Vilado, Lukasik, Belau and Briggs (2011), for example, investigated the relationship between demographic diversity in teams and their performance. Composition of teams and different character traits of individuals has further been paid much attention to by psychology researchers. Another stream of research on teams focuses on the virtuality of teams, i.e. teams that consist of members that are globally spread and communicate and collaborate based on virtual environments (Jarvenpaa & Leidner 1999; Gilson, Maynard, Jones Young, Vartiainen & Hakonen 2015, Hoch & Kozlowski 2014). A third stream of research focuses on tasks of teams (Cohen & Bailey 1997). Huang and Newell (2003) elaborate on three different groups of tasks that cross-functional teams, i.e. teams with members from different organisational backgrounds, engage in. Firstly, cross-functional teams are used for creativity and innovation tasks, secondly, they are used to generate consensus, meaning that perspectives from different organisational units are transformed into one consensus, and thirdly for strategy change initiatives.

2.1.1 Project Teams

As a special organisation of teams that might bring unique challenges to knowledge implementation, this study focuses on a particular form of teams, something in this study referred to as *project teams*. Project teams are often referred to in the literature to have the speciality that they consist of members that have the project team work as an add-on to their line organisation work and do not have the mandate to commit 100 per cent of workload to these project teams (Du Plessis & Hoole 2006). Rather, the team members work in a form of hybrid constellation, where they switch between the different tasks of line organisation and project team, providing a certain level of independence and flexibility (Mueller 2014). With an increased emphasis from organisations to structure activities and tasks around project teams, including knowledge-related activities, the organisational structure supporting these teams has increased in their importance (Mueller 2014; Du Plessis & Hoole 2006). This includes the organisation's ability to structure the teams successfully and contribute with supporting activities.

2.2 Knowledge Management Concept

2.2.1 Definition of knowledge

With the complex and various interpretations of the definition of knowledge, there is neither sense nor intention to provide a single true answer to the question: *what is knowledge*? However, it is important to clarify the context of knowledge for the purpose of this study. Because of its complexity in definition, knowledge in an organisational setting can be summarised as that knowledge is an essential resource that exists in a variety of forms that are associated with different characteristics, such as transferability or appropriability (Grant 1996a). In order to contribute to a mutual understanding of knowledge, its association to information should likewise be clarified. Without context, information is only data (Nonaka & Teece 2001; Nonaka 1994), thus, value is created when information is used in a strategic setting. Considered to primarily reside within individuals, it is imperative for organisations to make personal knowledge available to the rest of the organisation (Grant 1996a; Nonaka 1991).

2.2.2 Knowledge Management

Theoretical considerations, modelisations and elaborations on the concept of knowledge management have started to develop in the 1960s with several generations of literature that followed and accumulated insights and knowledge about the theoretical discipline (Gaviria-Marin, Merigó & Baier-Fuentes 2019). It was however until the 1990s that the most influential publications in the KM field emerged. Kogut and Zander (1992) explore combinative capabilities in the organisational context that allow organisations to efficiently create and transfer knowledge and thus become the reason for the existence of the firm. Nonaka (1991) further published a discussion of knowledge creation in firms that describes the constant interaction and exchange of *tacit* and *explicit* knowledge and later introduced the concept of the *knowledge spiral* (Nonaka 1994). Tacit knowledge is characterised by its difficulty to communicate and transfer, as it is very individual knowledge. Explicit knowledge on the other hand, is characterised by its ability to be communicated and transferred as it is a rather standardised and methodical type of knowledge (Nonaka 1991). Grant (1996a) later presents the knowledge-based theory of the firm, which is built on organisational capabilities of integrating individual knowledge (Grant 1996b). As an extension to the resource-based view (Barney 1991) with an additional focus on knowledge,

the knowledge-based theory of the firm transformed as a way to justify the strategic importance of knowledge within organisations, because of its special characteristics and imitability (Grant 1996a). The author further approaches the question of what is knowledge by acknowledging the intangibility and intricacy of knowledge and argues that the firm's primary task is to integrate specialised knowledge of multiple individuals. Over the years, KM has spanned across various theoretical disciplines, including, among others, Business Economics, Computer Science, Education, Psychology, Health Care and Geography. The growing importance of KM in theoretical conceptualisations can further be observed with the emergence of influential journals solely publishing KM related literature, such as the *Journal of Knowledge Management* or *Knowledge Management Research Practice* (Gaviria-Marin, Merigó & Baier-Fuentes 2019).

From the business perspective, KM as a concept has gained its influence and improved its importance for the strategic management of firms, due to its capabilities of creating a sustained competitive advantage (Grant 1996a; Lin 2007; Argote & Ingram 2000; Liao, Chen, Hu, Chung & Yang 2017; Lin & Wu 2014; Mudambi 2002). Alvesson and Kärreman (2001) acknowledge the complexity of the concept and argue for a contradiction between knowledge and management, as knowledge per se "is an ambiguous, unspecific and dynamic phenomenon" (Alvesson & Kärreman 2001, p. 995) that makes it difficult to manage. With several attempts to provide a definition of the concept of KM (Lin 2007; Alavi & Leidner 2001; Balle, Oliveira & Marques Curado 2020), there is still an ambiguity in its definition, with some authors focusing on extensive use of IT infrastructure, while others acknowledging the role and significance of people or communities (Alvesson & Kärman 2001). However, a shared interpretation by the academic literature is that KM is widely recognised as a process (Mudambi 2002; Lin 2007; Alavi & Leidner 2001; Balle, Oliveira & Marques Curado 2020). The process perspective of KM as seen by Alavi and Leidner (2001) consists of four main stages: creating, storing and retrieving, transferring, and applying knowledge. Furthermore, building on Nonaka's (1994) description of how organisational knowledge is created, Lin (2007) argues that KM can be defined as the process where "individuals and groups both within and between firms managing tacit and explicit knowledge to make better decisions, take actions and deliver results to support the underlying business strategy" (Lin 2007, p.2)

To summarise the understanding of the concept of KM in the context of this study, KM is perceived as the holistic, multilevel concept of a firm to create a competitive advantage by strategically creating, disseminating, absorbing and implementing knowledge.

2.2.3 Knowledge Transfer

An essential component of knowledge management, and often used synonymously, is the concept of knowledge transfer (KT). KT is, similar to KM, often seen from a process perspective (Minbaeva 2007), but has, in the understanding of the authors of this study, clear boundaries that can certainly be attributed to the terminology. While the management of knowledge spans several boundaries and adapts a holistic view on the topic of knowledge in firms, including for example the creation and storing of knowledge, knowledge transfer can be defined as a "dual process [...] which covers knowledge dissemination and absorption" (Tang 2011, p. 270). Minbaeva (2007) has a similar view and defines KT "as a process of dyadic exchanges of knowledge between the sender and the receiver" (Minbaeva 2007, p. 569) that consists of the elements "source, message, recipient and context" (Minbaeva 2007, p. 569). Szulanski describes KT "as a process in which an organization recreates and maintains a complex, causally ambiguous set of routines in a new setting" (Szulanski 2000, p. 10). Pedersen, Petersen & Sharma (2003) add that it is conducted via different media and mechanisms and therefore important that characteristics of the transferred knowledge and the transfer mechanism align. They argue that more tacit knowledge requires face-to-face communication, while explicit knowledge should be transferred via written media, such as manuals or reports. Misaligned knowledge characteristics and transfer mechanisms lead to reduced organisational performance (Pedersen, Petersen & Sharma 2003). Furthermore, the success of transferring knowledge is often dependent on the sender's disseminative capacity (DCAP) and the receiver's absorptive capacity (ACAP) (Minbaeva 2007, Tang 2011, Gupta & Govindarajan 2000), two concepts that will be elaborated on further down in the theoretical framework. Based on these definitions and elaborations and within the scope of this study, knowledge transfer will further be seen as a concept that describes the process of exchanging knowledge between a sending and a receiving unit, of which the success is influenced by the respective disseminative and absorptive capacity. KM on the other hand has a more holistic view on knowledge and the organisation and also incorporates how knowledge is created, stored, and implemented, thus covering preceding and consequent actions to the setting of KT.

2.2.3.1 Multilevel dimension of KT

Knowledge transfer as a concept is further often differentiated on different macro and micro levels. One branch of research on KT discusses the concept on an inter-organisational level within, for example, strategic alliances (Mowery, Oxley & Silverman 1996) or inter-firm

networks (Giudice & Maggioni 2014). A second branch focuses on intra-organisational KT (Tsai 2001, Szulanski 2000, Minbaeva 2007). The scope of intra-organisational studies spans across cross-boundary HQ-Subsidiary transfer (Gupta & Govindarajan 2000; Mahnke, Pedersen & Venzin 2005; Minbaeva 2007), intra-organisational networks (Tang, Mu & MacLachlan 2010; Tang 2011; Sroka, Cygler & Gajdzik 2014), teams (Mueller 2014), and individuals (Nonaka 1991; Tang 2011).

As discussed by Zhao & Ananad (2009), these levels are connected and complement each other to a certain extent. The authors argue that collective knowledge transfer and learning usually goes beyond simply the sum of individuals, as these collectives consist not solely of independent individuals, but rather exist as an interdependent collective, in which members use combination skills to reach a level beyond the pure sum of individual knowledge. Such collective knowledge is defined as "embedded among organizational members regarding how to coordinate, share, distribute, and recombine individual knowledge" (Zhao & Anand 2009, p. 964).

These elaborations on the multilevel perspective of knowledge transfer clearly demonstrate that a promising yet still lacking approach to KM research is a multilevel study that incorporates both the individual and collective level (Zhao & Anand 2009).

2.2.3.2 Attributes of Knowledge, Units and Relationships

In the academic literature, Minbaeva (2007) and Argote, McEvily and Reagans (2003) have contributed to a conceptualisation on the attributes of knowledge, units and the relationship between them. Minbaeva (2007) argues that there are four determinants that are decisive in the intra-organisational setting of KT. These determinants consist of characteristics of knowledge, characteristics of knowledge senders, characteristics of knowledge receivers, and the relationship between these units (Minbaeva 2007). Argote, McEvily and Reagans (2003) have a similar view and argue for three properties: properties of knowledge, properties of units and properties of relationships between units. Although there are differences in terminology, they show similarities in their implication. The first determinant, characteristics of knowledge (Minbaeva 2007) can be compared to properties of knowledge (Argote, McEvily and Reagans 2003). An attribute connected to the first determinant with a big influence on the knowledge transfer is the tacitness of knowledge. As previously mentioned, knowledge can be divided into explicit and tacit forms to describe the ability of knowledge itself to be transferred. Tacitness can be seen as a liability for organisations in their transferring process, as a high degree of tacitness can negatively affect the potential of

knowledge to be transferred (Minbaeva 2007; Argote, McEvily and Reagans 2003). Furthermore, similar attributes to tacitness of knowledge exists, including the complexity of the knowledge, its accessibility and specificity (Minbaeva 2007; Argote, McEvily and Reagans 2003).

The second determinant that Minbaeva (2007) and Argote, McEvily and Reagans (2003) discuss is the attributes of the units, being the sender and receiver. Argote, McEvily and Reagans (2003) mention primarily status as a decisive attribute, being deeply rooted in a sociological view on KT. The authors argue for the attribute's importance as it is found across various conceptualisations (Argote, McEvily and Reagans 2003). Nevertheless, in order to provide a comprehensive perspective, additional attributes are outlined by Minbaeva (2007). In her article, the attributes of the units are divided into senders and receivers. Compared to the sociological viewpoint by Argote, McEvily and Reagans (2003), Minbaeva (2007) addresses the aspects of ability and motivation which can be related to the disseminative capacity (sending unit) and the absorptive capacity (receiving unit) (Minbaeva 2007).

As the concluding determinant, the relationship between the units (senders and receivers) is addressed (Minbaeva 2007; Argote, McEvily & Reagans 2003). In both conceptualizations, it can be concluded that the degree to which knowledge is transferred successfully is related to the intensity of the relationship between the units. This intensity can be further divided into the dyadic relationship between social units and the pattern of connections between multiple units (Argote, McEvily & Reagans 2003). Several aspects of the dyadic relationship between units can affect knowledge transfer, starting with the relationship between units. Among these aspects are intensity of connection, communication, frequency of contact, and social similarity (Argote, McEvily, Reagans, 2003). The second approach considers the various types of connections that the units have with each other, including units in a network or owned by the same parent organisation (Argote, McEvily, Reagans 2003).

2.2.3.3 Disseminative Capacity

Described by Tang, Mu and MacLachlan (2010), the disseminative capacity (DCAP) encapsules the sending unit's ability to "efficiently, effectively and convincingly frame knowledge in a way that other people can understand accurately and put into practice" (Tang, Mu & MacLachlan 2010, p.1586). Hence, the disseminative capacity of the sending unit is an important part of a successful knowledge transfer process. Limitations of the sending unit comprise of both the characteristics of the knowledge such as tacit knowledge, complexity,

specificity and availability (Minbaeva 2007) and the ability of the sender such as language barriers, competence and communicative skills (Tang, Mu & MacLachlan 2010). Furthermore, DCAP should also be determined by the sender's motivation to share and transfer knowledge. The lack of connection to the receiving unit's and mutual benefits in a network setting or the risk of knowledge leakage may decrease the sending unit's motivation to share and transfer knowledge (Minbaeva 2007).

2.2.3.4 Absorptive Capacity

The concept of absorptive capacity (ACAP) was first introduced by Cohen and Levinthal (1990). The authors define ACAP as "the ability of a firm to recognize the value of new, external information, assimilate it, and apply it to commercial ends" (Cohen & Levinthal 1990, p. 128). Based on their elaborations, ACAP can be seen as a critical determinant of innovation and organisational performance. They further argue that a firm's development of ACAP is dependent on prior related knowledge and R&D spendings (Cohen & Levinthal 1990). The concept of ACAP has found increasing interest in research in the last year, with researchers and scientists utilising the concept of ACAP multidimensionally across the disciplines of, among others, organisational learning, knowledge, dynamic capabilities, social cognition, networks, (Apriliyanti & Alon 2017). To limit the concept's complexity and richness, ACAP will be viewed in this study through a multilevel lens that encompassess ACAP in the context of organisational learning (Cohen & Levinthal 1990), ACAP as a firm's dynamic capability (Zahra & George 2002), and ACAP in the knowledge management context (Gupta & Govindarajan 2000; Minbaeva 2007).

Besides Coven and Levinthal's (1990) influential insights on ACAP, the concept was further developed by Zahra & George (2002), who proposed that ACAP consists mainly of four distinct dimensions that can be split into two components, the *potential absorptive capacity* (PACAP) and the *realised absorptive capacity* (RACAP) (see Figure 1). PACAP consists of *acquisition*, which implies the identification and acquisition of external knowledge, and *assimilation*, which comprises the firm's routines and processes that allow for internalising, processing and understanding of acquired knowledge. The authors' procedural perspective on ACAP then implies RACAP as a subsequent component to PACAP, embracing the *transformation* and *exploitation* dimensions. Transformation hereby refers to the firm's capability to modify the characters of knowledge to achieve a fit with the organisational context in which knowledge is implemented into, based on the preexisting knowledge frame of the firm and the newly assimilated knowledge.

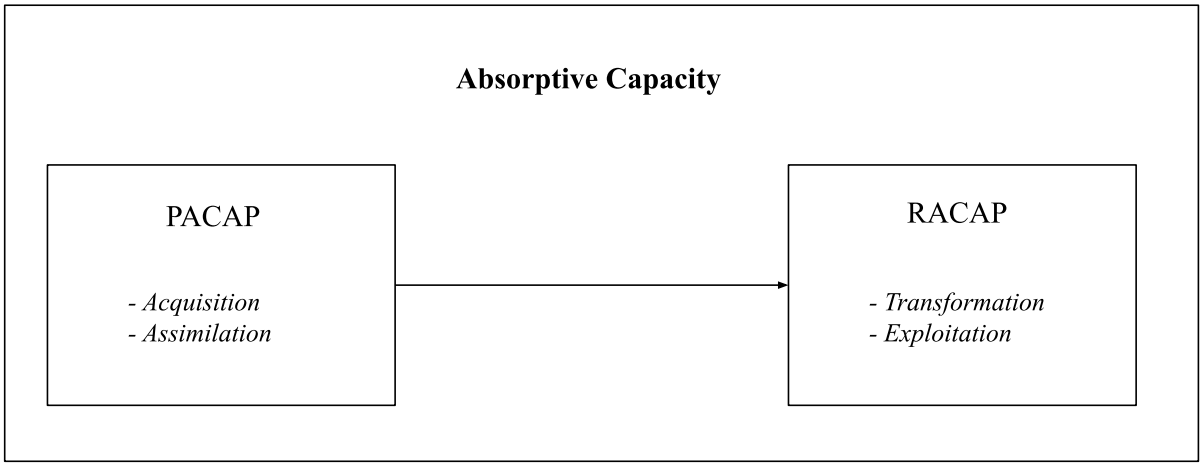

Figure 1: Absorptive Capacity. Adopted by Zahra & George (2002, p. 192)

The concluding exploitation dimension stresses the actual implementation of knowledge. The outcome of that capability is the systematic creation of new routines, processes, capabilities, or knowledge. In combination, PACAP and RACAP form the dynamic capabilities of a firm that lead to competitive advantage in the form of strategic flexibility, innovation, and performance improvement (Zahra & George 2002).

Approached in isolation however, the dimensions of PACAP and RACAP may lead to insufficient outcomes, as one dimension alone does not ensure competitive advantage to the firm. Firms that are lacking RACAP may well be in the position to be able to identify and internalise external knowledge, they might however lack the capabilities to utilise the knowledge to a sufficient extent and will thus suffer from the costs of acquisition and assimilation. In contrast to this, firms that have an overdeveloped RACAP in relation to their PACAP may benefit from short-term profits of knowledge exploitation but might be stuck in a competence gap after a while, because they lack competence to recognise new knowledge sources (Jansen, Van Den Bosch & Volberda 2005; Volberda, Foss & Lyles 2010). Jansen, Van Den Bosch and Volberda (2005) analysed the effects of different organisational antecedents on PACAP and RACAP and found empirical evidence for their hypotheses that coordination capabilities such as cross-functional interfaces, participation and job rotation positively affect PACAP, while socialisation capabilities such as connectedness and socialisation tactics rather affect RACAP of a firm's unit. In addition to Minbaeva (2007) arguing that motivation is an important element of the disseminative capacity of the sender, Osterloh and Frey (2000) further argue that motivation is also a significant element in the

absorptive capacity of the receiver. According to them, such motivation can lead to increased engagement in knowledge-related activities if knowledge receivers perceive the benefits of it.

2.2.4 Knowledge Implementation

Application (Cohen & Levinthal 1990), integration (Grant 1996b), exploitation (Zahra & George 2002), implementation (Akgün, Lynn & Byrne 2003), use (Kulkarni, Ravindran & Freeze 2006), or utilisation (Minbaeva et al. 2003; Selivanovskikh et al. 2020) of knowledge all describe a similar stage in the knowledge management process and a range of certain activities that is, from a procedural perspective, often seen as an overlapping but still consequent step of successfully transferring knowledge between a sender and a receiver. *Successful* hereby implies not only the pure transfer, i.e. the dissemination and assimilation, but goes beyond that and investigates the actual implementation of what has been received by the recipient into the recipient's operations (Minbaeva et al. 2003). Solely creating, storing and transferring knowledge without actually implementing it leads to the potential loss of the advantage generated by that knowledge (Minbaeva et al. 2003). Knowledge implementation is therefore considered the key to value creation and increased organisational performance through KM (Alavi & Tiwana 2002; Minbaeva et al. 2003; Mills & Smith 2011). The existence of diverse terminology within the literature (apply, exploit, utilise, implement, implicate, etc.) on this subject gives rise to difficulties in comprehending the underlying concept and may result in the reader experiencing uncertainty. Henceforth, *implementation of knowledge* will refer to the concluding stage of the knowledge transfer process, which describes the implementation of the assimilated knowledge into the recipient's operations (Alavi & Tiwana 2002).

2.2.4.1 Knowledge Implementation in Teams

Alavi & Tiwana (2002) argue that knowledge resides in individuals. Knowledge is therefore only metaphorically found on a firm- or group-level. Rather, the collectives of individuals, such as teams, provide a context that can facilitate knowledge application in individual's operations and processes. Teams serve as a viable mechanism for integrating knowledge in complex and nonroutine organisational tasks, particularly when the use of existing routines or processes is hindered by task uncertainty, novelty, and complexity. Through a team structure, diverse expertise and knowledge from individuals located throughout the organisation can be assembled, integrated, and applied to the task at hand. This integration process is facilitated by communication, collaboration, and the constructive resolution of conflicts, all of which

contribute to the creative implementation of knowledge within teams (Alavi & Tiwana 2002). Similar to this view, Sarin and McDermott (2003) argue that the implementation of the knowledge of the individual is facilitated by organisational structures through, for example, the provision of incentives or direction. Mueller (2014) focuses on cultural antecedents of organisations on knowledge sharing between project teams. Mueller (2014) did not clearly differentiate between the pure transfer of knowledge and the implementation of it. The authors results give insights into facilitating and hampering factors of knowledge sharing and implementation between teams of an organisation, including lack of time, level of flexibility of the organisational structure, output orientation, and openness towards change, opportunities, and improvement (Mueller 2014). Similar to that, Riege (2005) elaborated on knowledge-sharing barriers, but, in contrast to the definition that knowledge sharing focuses on the sender (Wang & Noe 2010), he also included the receiving side. Riege (2005) identified lack of time, lack of trust in the value of the transferred knowledge, lack of leadership and competitiveness between units as potential barriers to knowledge sharing from a receiver's point of view, which might influence knowledge implementation activities. Kulkarni, Ravindran, and Freeze's (2006) conceptualisation of a KM Success Model tests several relations between encouraging and daunting factors and the degree of knowledge implementation. They identified perceived usefulness of knowledge and user satisfaction, i.e. how satisfied users of KM systems are with these applications, as two key aspects when assessing the level of implemented knowledge within an organisation. These two variables are in themselves influenced by other variables, including organisational conditions including leadership, incentives, coworkers, and supervisors (Kulkarni, Ravindran & Freeze 2006). Related to this, Sarin and McDermott (2003) found that a democratic leadership style and a goal-structure initiated by the team leader positively affect knowledge implementation.

2.2.5 Organisational Learning and Knowledge Management

Organisational learning (OL) and KM literature have for several decades aroused the interest of researchers and scientists but, however, have been studied mainly as two separated streams in the organisational discipline. Reviewing both concepts nevertheless shows a certain interdependency between the two, as to which one does not occur without the other (Brix 2017). OL is often defined "as a change in the organization's knowledge that occurs as a function of experience" (Argote & Miron-Spektor 2011, p. 1124) which has found wide acceptance among scholars. According to Argote and Miron-Spekter (2011), researchers have observed that knowledge is embedded in organisational routines and processes. A

modification to these routines and processes therefore signifies a change in the knowledge, which in turn is an indicator that OL has taken place. It can therefore be summarised that OL takes place after knowledge has been transferred and implemented by an organisational unit. King (2009) motivates and reviews further ways to illustrate the relationship between the two concepts, one of which is the view of the dependency between OL and KM as that OL is perceived as the goal of KM. The KM processes support the organisation in embedding knowledge into its organisational routines and practices and thus provides continuous improvement to the firm (King 2009). In the context of this study, the concept of OL will therefore be interpreted as the outcome of KM processes that occurs through successful implementation of knowledge. Organisational units have an existing knowledge stock that is embedded in their operations, routines, and processes (Argote & Miron-Spekter 2011). When new knowledge is transferred to the unit, the unit changes its operations, routines, and processes, when implementing the new knowledge (Minbaeva et al. 2003). This indicates that organisational learning has occurred (Argote & Miron-Spekter 2011). The new knowledge becomes a part of the unit's existing knowledge stock, leading to ongoing improvement and adaptation.

2.2.6 RACAP, Knowledge Implementation and Organisational Learning

There is ambiguity in the academic literature when describing the differences between realised absorptive capacity (RACAP), knowledge implementation and OL. As a means of clarifying the relationship between these three elements within knowledge management, the definition of RACAP can be used as a foundation that consists of the transformation and exploitation of the knowledge that is transferred. The concept of knowledge implementation is clearly connected to the activity of exploitation, since knowledge cannot be exploited if it is not implemented. As a result, it is important to view knowledge implementation as the final component of RACAP in order to ensure clarity between the two concepts.

The intention to implement the transferred knowledge can be construed as the fundamental building block of OL, since ACAP determines a firm's ability to learn (Apriliyanti & Alon 2017). According to Zahra and George (2002), exploiting knowledge leads to the systematic creation of new routines, processes, and capabilities. It is similar to Argote and Miron-Spektor's (2011) argument that OL can be viewed as a function of experience. Furthermore, OL can be seen as the goal of KM (King 2009), thus the final part of KM and a successful knowledge transfer.

2.3 Conceptual Model

This section summarises the literature review on teams, KM and related subtopics to eventually develop a conceptual model that guides both authors and readers during this work and creates a mutual understanding of the underlying theoretical and practical implementation. As seen above, knowledge in firms is a highly complex, multidimensional, and rich-in-detail topic for which many approaches have been created in the past (Lin 2007; Alavi & Leidner 2001; Balle, Oliveira & Marques Curado 2020). Looking at the concept from a process-perspective (Mudambi 2002; Lin 2007; Alavi & Leidner 2001; Balle, Oliveira & Marques Curado 2020), it becomes evident that its multifaceted dimensions all have significant impact on organisational performance. The research gap on how project teams affect knowledge implementation however leaves uncertainties that this study aims to illuminate. The theoretical framework presented existing literature on teams, clarified this study's understanding of project teams and emphasised the multidimensionality of teams. Furthermore, an overview of the concept of knowledge management was provided, including the related concepts of knowledge transfer and knowledge implementation, with a focus on knowledge implementation in teams. Based on this, ACAP and its dimensions were characterised for the scope of this study as an ability of the receiving unit, that is significant for successful KM, as it includes the ability to acquire and implement knowledge. Additionally, the interrelatedness between OL and KM has been reviewed and interpreted as a subsequent process in which OL is an outcome of successful KM (Akgün, Lynn & Byrne 2003). Figure 2 firstly illustrates the understanding of the broad concept of knowledge transfer within firms and places knowledge implementation into that concept, whereas Figure 3 then shows a detailed understanding of how knowledge implementation in a project team context is perceived by the authors.

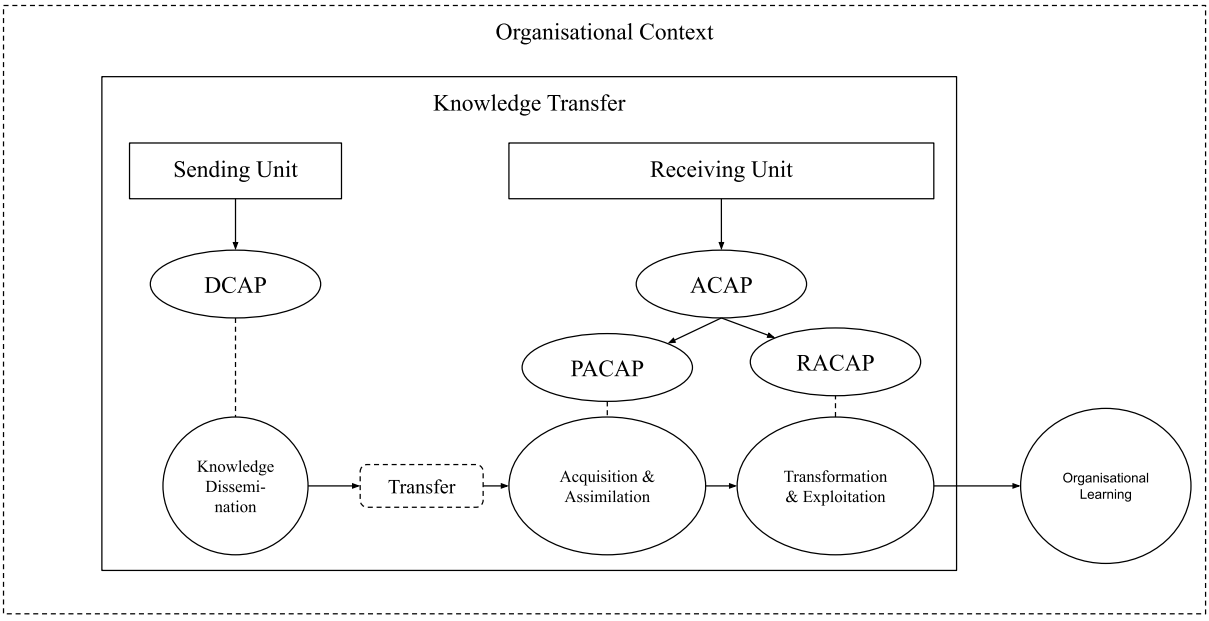

Figure 2: Procedural Perspective on KM and OL in the intra-organisational context. Compiled by authors.

As summarised in the above figure, the scope of this study focuses on knowledge in an intra-organisational context. The sending unit disseminates knowledge by transferring it to the receiving unit (Minbaeva 2007; Tang 2011). The receiving unit absorbs that knowledge and implements it into its operations (Alavi & Tiwana 2002), here visualised as acquisition, assimilation, transformation, and exploitation of the transferred knowledge (Zahra & George 2002). Within that organisational context, successful knowledge transfer enables organisational learning, as the successful implementation of knowledge allows for a change of routines and processes. To reach that stage, knowledge needs to be transferred firm-internally. The ability to disseminate is influenced by the DCAP of the sending unit (Tang, Mu & MacLachlan 2010). The knowledge sending activates two processes within the receiving unit that can be referred back to PACAP and RACAP (Zahra & George 2002). The receiver's ACAP is in so far decisive, as it influences the extent to which the absorbed knowledge enables organisational learning (Kim 1998). Organisational learning processes affect organisational performance (King 2009), which is then creating a competitive advantage through knowledge management.

Derived from the above presented model, the receiving unit will get further attention and a presentation of a conceptualisation that focuses on knowledge implementation in project teams is shown in Figure 3. Existing literature on teams and knowledge implementation emphasise that knowledge resides within individuals (Alavi & Tiwana 2002).

It is however further stressed that the team context affects knowledge implementation, through, for example, leadership styles, coworkers, and collaboration (Sarin and McDermott 2003; Mueller 2014; Zhao & Anand 2009). Based on knowledge transfer literature, it is further evident that also the relation between sender and receiver is of importance in managing knowledge in organisations (Argote, McEvily and Reagans 2003; Minbaeva 2007). Therefore it can be argued that three dimensions must be incorporated, to assess how project teams affect knowledge implementation. Firstly, individual determinants are identified as having a potential influence on knowledge implementation. Secondly, team determinants need to be considered. And thirdly, to illustrate the relationship between the sending team and the receiving team, socialisation determinants that reflect this relationship between sender and receiver, are part of the below presented conceptual model.

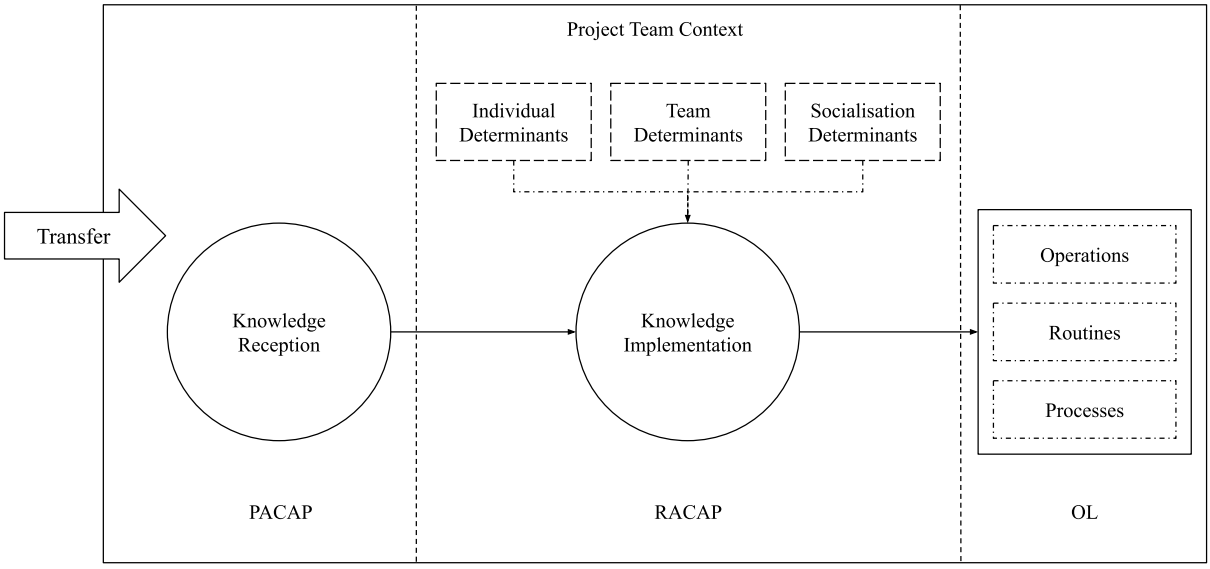

Figure 3: Conceptual Framework of Knowledge Implementation in Project Teams, compiled by authors

Figure 3 shows the conceptual model of how project teams affect knowledge implementation, representing the focus of the study. Knowledge implementation is a central aspect of that model, with knowledge transfer and knowledge reception as preceding processes, and organisational learning as an outcome of knowledge implementation. In the context of this study, a prerequisite for knowledge to be implemented is that a unit has disseminated knowledge through one or more channels provided in the organisational context. The transferred knowledge enters the project team context and is, in a first step, received by the project team members. This reception is reflected by activities such as reading through

learning material, conducting training, personal teaching, digital learning courses, etc. This stage can be referred back to PACAP. As a subsequent step in the model, knowledge is implemented into operations, routines, and processes, representing RACAP. The degree of knowledge implementation is affected by individual, team, and socialisation determinants that reside within the project team context. As a concluding step, following successful knowledge implementation, the change in operations, routines, and processes reflects organisational learning.

3 Methodology

3.1 Scientific Approach

3.1.1 Qualitative Research Design

A qualitative approach was chosen for the research design of this study. Qualitative research is particularly suitable for "opening the black box" (Doz 2011, p. 583) of the firm and shed light onto phenomena that are difficult to detect when taking a quantitative approach. As a gap was identified in existing literature on how project teams affect knowledge implementation, a quantitative study was less suitable to explore this phenomenon. Rather, the aim was to provide insights into this field by exploring and providing "thick descriptions" (Doz 2011, p. 586) of the determinants that affect the implementation of knowledge transferred across teams within an MNC. By taking a qualitative approach, the study could contribute to the declining studies of intra-organisational issues of MNCs and illuminate informal and subjective processes that strongly influence the organisational outcome. This approach further enabled the research to account for the complexity and contextuality of the topic by the ability to explore deep, personal attitudes and perceptions that in a quantitative study would most probably not be taken into account (Birkinshaw, Brannen & Tung 2011).

3.1.2 Abductive Research Approach

The study has been based on an abductive research approach and systematic combining (Dubois & Gadde 2002). The abductive research approach is characterised by a constant revision and combination of theory and empirics, thus a constant back-and-forth engagement with literature, conceptual framework, empirics, and analysis (Dubois & Gadde 2002). The research began by gathering relevant literature and reviewing the relevant theoretical fields of knowledge implementation and project teams as the organisational context. This initial literature review was crucial for acquiring a suitable knowledge stock and creating a conceptual model to derive the interview guide from. During the data collection process, some alignments were found to be necessary. This included a stronger emphasis on project teams in terms of that for the teams' members this is an extra task in addition to their line organisation. Furthermore, after analysing the findings, it became evident that the theoretical framework lacked revision of research on the importance of individuals in KM. Such an alignment of theory and empirical data supported the understanding of both theory and empirics, as empirical observations help understanding the theory and vice versa (Dubois & Gadde 2002). Furthermore, the observations made during the collection of the empirical data

supported the abductive research process by identifying new phenomena that needed to be considered in the theoretical framework.

Furthermore, with the limited existence of qualitative studies within the topic of knowledge management, the abductive approach facilitated the opportunity to be more open about the findings in the data and allowed the collection of it to affect the prior interpretation of the researchers (Bell, Bryman & Harley 2019). This flexibility allowed the data to be explored more freely and identify patterns and meanings as they arose. Thus, the abductive approach was applicable to the setting of this study.

3.1.3 Case Study

A case study was selected as an appropriate research design for this study in order to meet the need for an in-depth research approach. A case study is an appropriate research method for a study focusing on contemporary events in a real-life context and aiming to explore 'how' research questions (Yin 2009), as in the underlying study. A case study consists of a detailed and intensive analysis of a single case and the focus is more on the particular setting and characteristics of the specific case than on other aspects (Bell, Bryman & Harley 2019). By closely examining the case and its context, researchers are able to identify patterns and insights that they would not be able to uncover with a more comprehensive approach. By taking this approach for this study, it allowed the researchers to get a deeper understanding of the particular case and thus, draw more accurate and insightful conclusions. The research approach showed to be especially important for understanding the complexity of KM and knowledge implementation in this specific project team setting. This approach represents an *idiographic* approach, as it highlights unique features of the case study (Bell, Bryman & Harley 2019).

3.1.3.1 Introduction of Case Company

This study was conducted through a case study with the purpose of investigating a single case at a multinational firm. The multinational firm was a Swedish MNC that operated in the high tech-industry with far more than 10,000 employees. Within that firm, one department was responsible for developing a data strategy and teaching other teams about the strategy and related frameworks and tools that were supposed to be implemented into the team members' daily operations. This team represents the knowledge sending unit. The members of the sending unit contribute 100 per cent of their workload to the project. The sending unit is transferring knowledge about data strategy, how to apply it, strategic frameworks, and

associated tools to project teams (see Figure 4). These project teams are organised by the organisational background (e.g. marketing, customer service, or technical fields) and consist of team members who usually have the project team work as an add-on task to their line organisation work. The work in the teams includes the absorption of knowledge about the data strategy, strategic frameworks and tools related to that. Furthermore, they are supposed to implement that knowledge into their operations, routines and processes and also share the application of strategy and tools with a wider audience in their line organisation and related departments.

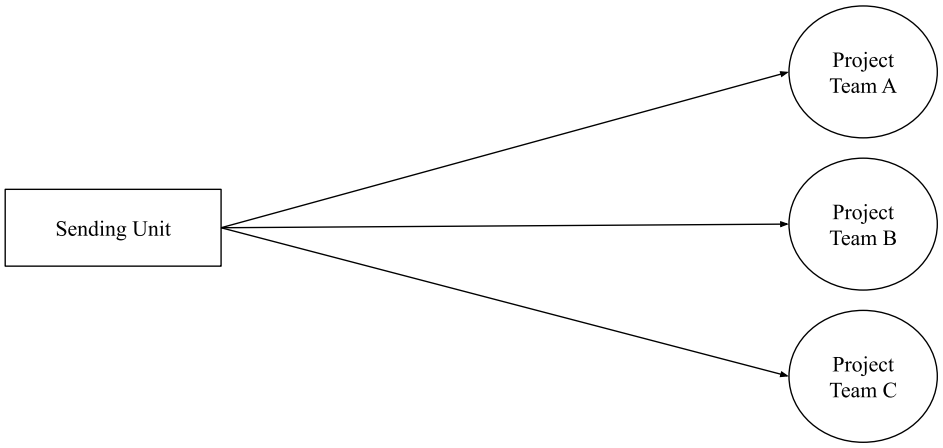

Figure 4: Sending Unit and Project Teams, compiled by authors

3.2 Conceptualisation of the Theoretical Framework

In order to establish the theoretical framework for this study, the research process was initiated by examining existing literature by conducting an extensive review of relevant articles and theories on knowledge implementation and teams. The intention was to build a thorough understanding of teams in organisations and illuminate the overarching concept of knowledge management and related activities and concepts, to serve as a foundation for the research agenda and the research question (Bell, Bryman & Harley 2019).

To facilitate a structured process of exploring and reading the literature, a number of keywords was used to find relevant articles, including, among others, ‘teams’, ‘project teams’, ‘knowledge management’, ‘knowledge transfer’, ‘disseminative capacity’, ‘absorptive capacity’, ‘organi*ational learning’, ‘knowledge implementation’ and ‘multi-level knowledge transfer’. These keywords created a foundation that could be further elaborated by finding additional keywords in the process. With a strong emphasis on KM in several of the courses of the International Business and Trade programme previous to this

academic paper, the researchers had already established a basic insight in the literature. By that, a prior understanding of essential keywords was developed. To increase the understanding of the research within the field, several literature reviews (Wang & Noe 2010; Zahra & George 2002; Basten & Haamann 2018; Michailova & Mustaffa 2012; Argote, McEvily & Reagans 2003; Ahmad & Karim 2019; Gaviria-Marin, Merigó & Baier-Fuentes 2019) were used as well to ensure that the holistic approach to this topic was captured in an appropriate way, including relevant authors, articles, journals, and books.

The majority of literature search was conducted using Scopus, Google Scholar and the Supersearch tool provided by the Gothenburg University Library. A lot of emphasis was put on solely using peer-reviewed articles with an appropriate number of citations. Additionally, the *Field-Weighted Citation Impact* provided by Scopus served as a metrics to ensure credibility. Furthermore, the collecting and structuring of literature was facilitated through the use of EndNote. By doing so the literature could be structured in several different ways by dividing the articles in different sub-topics, such as absorptive capacity, KM in teams, methodology, and team-level knowledge transfer, among others. Furthermore, EndNote enabled each article to be uploaded in a shared library. This allowed collaborative reading among the researchers, including marking and noting on each article to facilitate an effective and mutual understanding of the literature. The use of bibliographic software such as EndNote also minimised the risk of potential faults in referencing (Bell, Bryman & Harley 2019).

3.3 Empirical Data Collection

3.3.1 Sources

The empirical data of this study was mainly based on primary data collected through semi-structured interviews with different actors of the case company, led by an interview guide (see Appendix 1). The primary data was collected in interviews either virtually or on-site. Semi-structured interviews were a suitable method for data collection for this study, as they allowed for detailed insights into personal perceptions and experiences and facilitated the understanding of the respondents' point-of-view (Bell, Bryman & Harley 2019). Data was further collected from secondary sources, including company-internal documentation and information that contributed to increasing the understanding of the case scenario and the different actors. Particularly in the beginning of the research work in the case company,

company employees from the sending unit held presentations about the case setting and background, which provided valuable insights and contributed to the overall understanding.

3.3.2 Sampling

3.3.2.1 Sampling Criteria

Sampling Criteria for Case Company

The sampling criteria for the case-company were for once the size of the company, as it was perceived by the researchers as being influential for large scale project team activities. For the purpose of finding an appropriate context for knowledge implementation in project teams, small firms were not deemed appropriate. Furthermore, collaboration in intercultural teams and across borders was perceived to potentially provide valuable insights for knowledge implementation determinants, something the researchers expected to take place rather in large multinationals than smaller firms. Second, the sampling criteria focused on cooperating with a Swedish multinational, as this would facilitate communication and physical presence at the firm's facilities. Thirdly, the case company was supposed to provide a suitable setting for this study, meaning that an organisational structure of teams that receive knowledge from other units was a necessity. Lastly, this study aimed at analysing a company from the high-tech industry. Firms in this industry need to create teams with a special focus on learning and knowledge activities, because they are facing high uncertainties in their environment and compressed lifecycles of their products (Sarin & McDermott 2003), and thus providing a suitable and interesting context for this study.

Sampling Criteria for Teams and Respondents

To gather valuable insights that eventually could answer the research question, several sampling criteria for teams and respondents needed to be fulfilled. The teams needed to act as knowledge receivers. It was further a criteria that the project teams have reached different stages in their maturity, as the researchers expected that this might potentially influence knowledge implementation activities. To clarify background information and increase the researcher’s understanding, a part of the sample was also the sending team. Therefore, sampling criteria for the respondents included that they were part of either the sending unit or the receiving project teams. Furthermore, to ensure a wide insight into the research topic, another sampling criteria was that the respondents reflected both managing and regular team member positions in the receiving units. Related to that, different duration of participation in

the teams was another criteria for the respondents, to ensure wide insights into different backgrounds of respondents.

3.3.2.2 Sampling Approach

The three-folded sampling criteria of case company, teams, and participants reflect three different levels of sampling, an approach that can often be found in case studies (Bell, Bryman & Harley 2019). The sampling of case company, teams, and participants was guided by the research topic and question and thus followed the approach of purposive sampling (Bell, Bryman & Harley 2019). The sample consisted of twelve employees of the case company that are working either in project teams (receivers of knowledge) or in the department that is responsible for a strategy rollout through teaching these project teams (senders of knowledge). The respondents were targeted by the researchers considering who fulfilled the sampling criteria mentioned above. All of the respondents fulfilled the criteria by either being part of the sending unit or the project teams, and therefore they had first-hand experience and insights into the determinants affecting knowledge implementation.

3.3.2.3 Compilation of Sample

The sample size of twelve respondents (see Table 1) seemed to be suitable for the case study, as the aim was to gain insights into a very specific case situation within one MNC. The number of employees working in that scenario is therefore limited. Out of the twelve respondents, three were part of the sending department, while nine respondents were part of three different project teams. Two of the nine respondents were team managers. This broadly spread approach of interviewing members of different teams and different functions allowed for different perceptions and points-of-view to be taken into account.

Respondent	Team
Sender 1	Sending Unit
Sender 2	Sending Unit
Sender 3	Sending Unit
Project Team Manager A1	Project Team A
Project Team Member A1	Project Team A
Project Team Member A2	Project Team A
Project Team Member A3	Project Team A
Project Team Manager B1	Project Team B
Project Team Member B1	Project Team B
Project Team Member B2	Project Team B
Project Team Member C1	Project Team C
Project Team Member C2	Project Team C

Table 1: List of Respondents

Table 1 provides an overview of the respondents that have been interviewed. The respective number does not indicate the order in which the interviews were conducted.

3.3.3 Interviews

A commonly used method to collect empirical data in a qualitative study are semi-structured interviews. Semi-structured interviews often follow an interview guide, which covers only a few questions and specific topics that the interviewer wants to be answered during the interview. It provides a frame to the interviewees' responses to ensure applicability and relevance and also helps the interviewer to ensure that focus on the research topic is maintained during the interview (Bell, Bryman & Harley 2019). The semi-structured approach was suitable for this study, as it allowed exploration of the respondents' perceptions. Yet, it still supported the interviews with a certain degree of focus. In terms of the relevance of the research, it helped steer the interviews in the right direction whenever it was anticipated that respondents needed some guidance in their answers, as they were approaching topics that were not part of the scope of the study. In line with this, a more structured approach was ruled out. This was to ensure that the respondents were not limited in

expressing their perceptions and pain points relevant to the study. With the research question in mind, it was crucial that a certain level of openness in the respondents' responses was achieved to obtain the most accurate view of the results.

The interview guide (Appendix 1) also supported the interviews, by ensuring that all topics were covered that were perceived as being important. It was however not always followed strictly, as the topics were connected to each other to a certain extent, and often covered by the respondent without specifically asking for it. During the interviews, it was crucial to be mindful of the study's relevance and to stay updated on any modifications to the question sequence, as stressed by Bell, Bryman, and Harley (2019). Thus, it was imperative to listen closely and engage in the discussion. This was to not miss any crucial parts but also to dig deeper into topics that have only been touched upon briefly. A facilitator for this was that all interviews were conducted by both authors together to ensure an equal distribution of questions and comprehension. The interview guide in Appendix 1 slightly differs to the one that was actually used, since the original interview guide was more case specific. To not disclose any sensitive information, the interview guide in Appendix 1 has been rewritten in a more general way.

The interviews took place between 2023-03-29 and 2023-04-25 and were scheduled in advance via email. Initial contact with suitable respondents was established through representatives at the case company, including an introduction of the study and researchers to increase the responsiveness rate. In the next step, the potential respondents were contacted directly by the researchers. This approach ensured a responsiveness rate of 100 per cent. All of the selected respondents received an email a few days in advance of the scheduled meetings. This included a formal introduction of the researchers, the purpose of the research and important parts such as recordings, transcription, confidentiality and anonymity were addressed accordingly. The aim of this approach was to save some time during the interview itself, as well as making the interview process as transparent as possible for the respondents. In the beginning of each interview, a referral to that email was made, including asking for their consent to record the interview. As emphasised by Bell, Bryman and Harley (2019), an introduction before commencing an interview is crucial as it establishes a clear understanding of the interview's objectives and scope.

Four interviews could be conducted on-site at the case-company’s HQs. The remaining interviews were conducted using Microsoft Teams, as other respondents were spread globally, including other parts of Sweden, Ireland, Mexico, or the United States. To save time and costs, these interviews were conducted online. Except one, all of the virtual

interviews were conducted with the camera on, which was not required but it was noticed that it contributed to a more casual atmosphere and a better dialogue. In non face-to-face interviews, technological tools in meeting software, such as cameras or visual aids, enable a normal and natural way for people to interact (Bell, Bryman & Harley 2019). All of the interviews lasted between 30 and 45 minutes and were audio-recorded. To facilitate an effective transcription, a speech-dictating tool provided by Microsoft Word was used in support of manual transcription depending on the audio quality of the interviews. The utilisation of audio recorders and transcription programs is crucial as it enhances the interviewer's engagement during the interview (Bell, Bryman & Harley 2019).

3.4 Data Analysis

The large amount of unstructured data in the form of transcripts has been analysed by conducting thematic analysis. The data was therefore analysed for certain themes that recurred and were expressed similarly or themes that respondents perceived very differently compared to each other (Bell, Bryman & Harley 2019).

The thematic analysis was organised by conducting a thematic networks analysis (Attride-Stirling 2001). Thematic networks analysis aids in presenting empirical findings in a structured approach and on different levels. It consists of three layers of themes, being basic themes, organising themes, and a global theme. First, the data was coded to identify the basic themes. The coding process started as early as possible and before all interviews were conducted, to increase the understanding of the data and facilitate the handling of the large amount of data (Bell, Bryman & Harley 2019). By reading and taking notes at the same time, recurring patterns of themes that were brought up by the respondents were identified. All codes were collected in an Excel Spreadsheet and the respective parts from the transcripts were sorted accordingly. After that, the coding was reviewed and repetitive themes that were describing the same phenomena were identified and merged (Bell, Bryman & Harley 2019). Some of the identified codes were based on existing knowledge management literature, some others were based on the empirical findings. *Strategic Fit* (Kulkarni, Ravindran & Freeze 2006), *Motivation* (Minbaeva et al. 2003; Gupta & Govindarajan 2000; Sarin & McDermott 2003), *Time* (Mueller 2014; Riege 2005), *Perception of Learning Activities* (Kulkarni, Ravindran & Freeze 2006), *Managerial Support* (Kulkarni, Ravindran & Freeze 2006; Sarin and McDermott 2003), and *Proximity between Sender and Receiver* (Riege 2005; Jansen, Van Den Bosch & Volberda 2005), are affecting learning and knowledge management and

therefore could have had an impact on knowledge implementation too. The remaining codes are based on recurring patterns in the data. The three categories from the conceptual framework, “individual”, “team”, and “socialisation”, then functioned as organising themes. These three organising themes were grouped under the global theme of knowledge implementation in project teams. Figure 5 below provides an overview of the thematic network analysis.

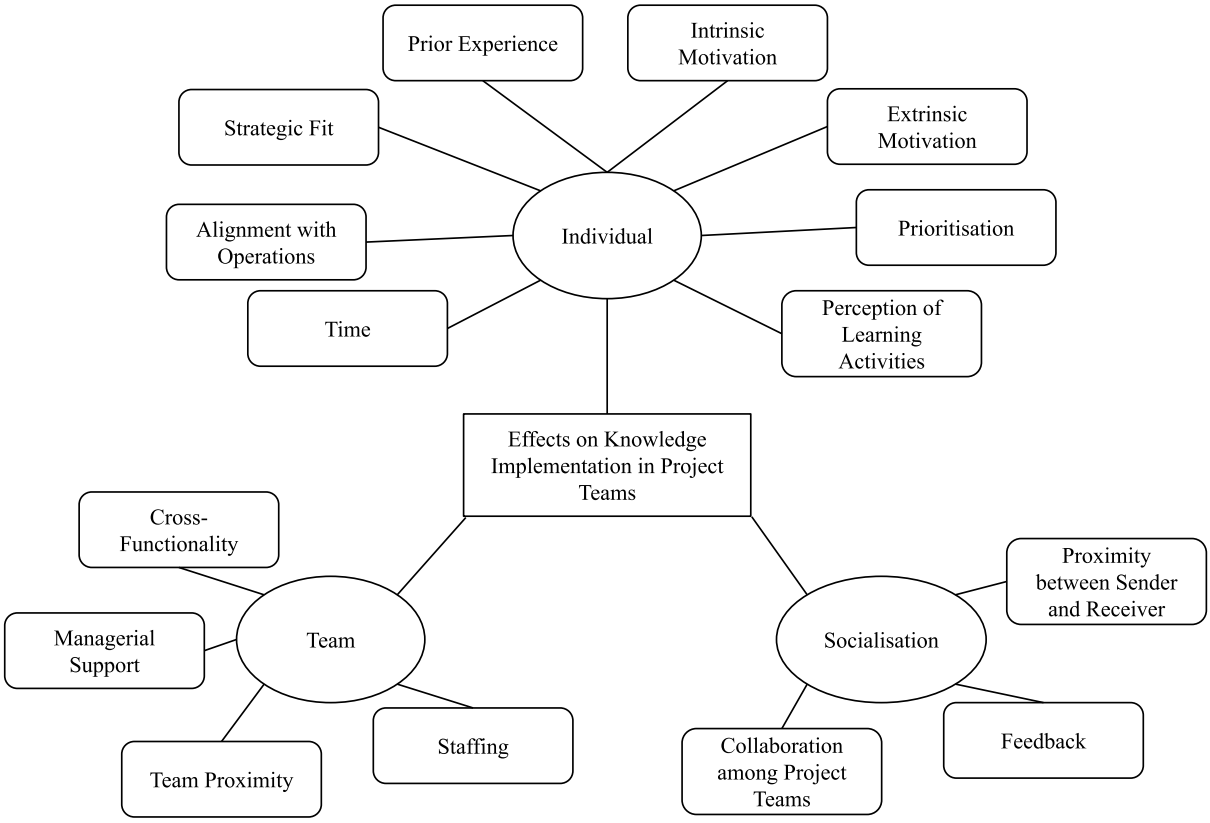

Figure 5: Thematic Network Analysis, compiled by authors

3.5 Quality of research

In order to uphold research quality, the authors have implemented the trustworthiness criteria, stressed by Bell, Bryman, and Harley (2019) as a relevant method for evaluating quality in qualitative research. Trustworthiness is divided into four sub-criterias being credibility, transferability, dependability and confirmability (Bell, Bryman & Harley 2019).

Credibility of the study was ensured through careful consideration of the study setting and respondents. To align the researchers' interpretations of the organisational setting and team descriptions with the case company's perspective, discussions were initiated with

representatives of the company, which increased the understanding of the case context. Furthermore, to increase credibility, respondent validation was emphasised to ensure that the interpretation of the social world that was studied is interchangeable with the interpretation of the respondent (Bell, Bryman & Harley 2019). To ensure respondent validation, transcripts were sent back to the respondents so they could be checked for any misinterpretation or misunderstandings of their statements. In addition, a draft of the empirical chapter was sent to the supervising employee at the case company and was followed by a meeting a few days later to ensure that the context of the case study was interpreted in the correct way. Furthermore, the aspect of triangulation was accounted for in this study by looking at three different subunits of the department for this study (Bell, Bryman & Harley 2019). This allowed for consideration of potential biases of individual units.

Transferability assesses the findings' ability to be applied in another setting (Bell, Bryman & Harley 2019). With the intention to analyse the specific setting of a specific department in the chosen organisation, the purpose was not to statistically generalise (Yin 2011) but rather to particularise the findings. To facilitate transferability in this study, an extensive emphasis was put on ensuring a clear description of the study for the reader, with the aim to improve and ensure that the aspect of transferability was achieved. With the complex and several interpretations on the topic of knowledge management and its related concepts, a clear description of the interpretations and foundation for this study was emphasised. The rich descriptions that were provided resulted in a conceptual model that can be transferred to other studies, providing analytical generalisation (Yin 2011). The finalised conceptual model provided a description of how project teams affect knowledge implementation and can be transferred to other studies investigating this topic.

The dependability of a study relates to the findings' ability to take place in a similar setting at another time (Bell, Bryman & Harley 2019). To ensure that this characteristic was fulfilled, storage of all relevant notes, documents, recordings and other relevant information was committed through a structured process. This was of special importance due to the amount of interviews and data collection (Bell, Bryman & Harley 2019). Furthermore, it was decisive to have an open dialogue with the case company in terms of what sort of information is kept and how it is stored. Thus, sensitive information of the organisation was stored on assigned locations in compliance with existing regulations and a non disclosure agreement.

The last characteristic, confirmability, puts the perspective on the researcher’s values and their influence on the findings (Bell, Bryman & Harley 2019). To underscore the significance of the unique attributes of this study, the focus was placed on the respondents'

perspectives and the relevant theory, leaving minimal space for the researcher's personal values and predictions. In addition, the researcher's biases were reduced by the measure of triangulation in the empirical data, excluding the possibility that only the statements of certain respondents represent the entirety of empirical findings. Furthermore, the authors were constructive and open towards each other regarding the reasoning or interpretation of the findings, which also minimised potential biases.

Moreover, Bell, Bryman and Harley (2019) argue for the additional characteristic of relevance as an important aspect of the conducted study's relevance in the academic literature. In order to highlight the study's relevance, the attention was directed towards the scarcity of qualitative research on knowledge management, particularly the limited amount of studies investigating knowledge implementation within a project team setting.

3.6 Ethical considerations

Throughout the entire research process ethical considerations were accounted for. These considerations were based on the four principles brought up by Bell, Bryman and Harley (2019), being avoidance of harm, informed consent, privacy, and preventing deception.

During the empirical data collection, measures were taken to ensure that participants were not potentially harmed. Throughout the interviews, efforts were made to maintain a balanced atmosphere that was both relaxed and professional, aiming to minimise the feelings of stress and anxiety experienced by the respondents. In order to protect the career prospects or firm-internal consequences, especially when discussing managers and colleagues, anonymity was granted to the extent possible. This included avoiding the disclosure of any names of respondents, project team names, roles, etc. However, the respondents were made aware that it could not be entirely ruled out that certain statements could be traced back to their person, including, for example, information about the duration of each project team member's participation. The respondents were given the option to choose not to answer certain questions or avoid certain topics. Prior to the study, potential respondents were informed in advance about the topic of the study, the data analysis process, and ethical considerations, ensuring that respondents had the opportunity to make an informed decision about participation (Bell, Bryman & Harley, 2019). Information was provided regarding the recording devices and transcription software used, both in the mail that was sent prior to the interviews and also orally before the interviews started. Privacy of respondents was ensured to the best extent possible in accordance with informed consent. The transcripts were

analysed for any sensitive information related to the respondents themselves or the case company. To reduce the risk of disclosure of sensitive information, relevant aspects were discussed with the case company to eliminate all liabilities. This includes a revision of the interview guide (see Appendix 1) that has been altered to not include company specific details included in the questions.

Additionally, through respondent validation (Bell, Bryman & Harley 2019), thorough checks were conducted to identify and remove any potentially sensitive information that might have been overlooked, as the researchers gave the respondents the possibility to read through the transcript of their respective interview. Lastly, open and transparent communication was maintained throughout the study to avoid any deception of the respondents. There was no intention to provide false information to the respondents, and all inquiries about the scope of the study were truthfully addressed.

4 Empirics

In this chapter the empirical data is presented. It has been collected by conducting interviews with respondents from various teams and in different positions (see list of respondents in chapter 3.2.2.2). To increase the reader's understanding of the empirical data, this chapter starts by describing the background of the case study, in order to emphasise the project team characteristics and the role of knowledge in that setting. In order to structure the findings, empirical data will be presented in three different main categories (individual, team, socialisation), each of which is split into sub-categories (see chapter 3.4 Data Analysis). The three main categories orientate on the conceptual model (see chapter 2.3)

4.1 Background of the Case Study

This study was conducted at a Swedish MNC operating globally on all continents. The scope of the study comprised four different teams that were affiliated in a sender and receiver-relationship. The field in which these four teams performed could be expressed as the data strategy field. One of the teams, hereafter labelled as the sending unit, was a permanent team with the majority of the team members allocating 100 per cent of their working hours to the team. The remainder comprised three project teams, which were also referred to as receiving units in the relationship context. Each project team had a project team manager and a varying number of project team members. The setting of the project teams implied that the manager and the members were only engaged in the project teams part-time; a set amount of working hours each week to cover the tasks in the team. Most of the project team members allocated the majority of their working hours in their respective line organisations that were situated in various parts of the MNC. The size, maturity, and background of the project teams differed, because they were rolled-out and initiated on an ongoing basis. This means that not all project teams were initiated at the same time, but rather are initiated when the need in their field is identified. The teams included in this study consisted of three to ten team members. There existed additional project teams to the ones that were solicited for this study in the MNC.

The sending unit acted as a creator and sender of knowledge within the data field, with a focus on knowledge about the MNC's data strategy. This knowledge comprised strategies, perceptions, processes, tools, and strategic frameworks within the field of data. The knowledge was transferred to the project teams through different channels, including personal communication, virtual meeting software, electronic mail, instant chat channels,

presentations, and other documents on shared internal websites. In addition, there also existed designated learning activities, mainly presented through different learning modules on an e-learning platform. These learning modules provided for the project teams covered different parts of knowledge, for example know-how about tools, firm-internal standards of data regulation, and best-practices about application of the data framework. To ensure that the members of each project team had engaged with these learning modules, there were assessments connected to each module. If the participant passed the assessment, they got a certificate as a proof of their knowledge in the field. The majority of the project team members were expected to take these assessments some months after joining the project teams.

Figure 6 illustrates the setting and the relationship between the sending unit and the project teams. The sending unit reflects the creator of knowledge, who then transfers that knowledge to the project teams, and receives feedback with the aim of improving the quality of that knowledge and the transfer.

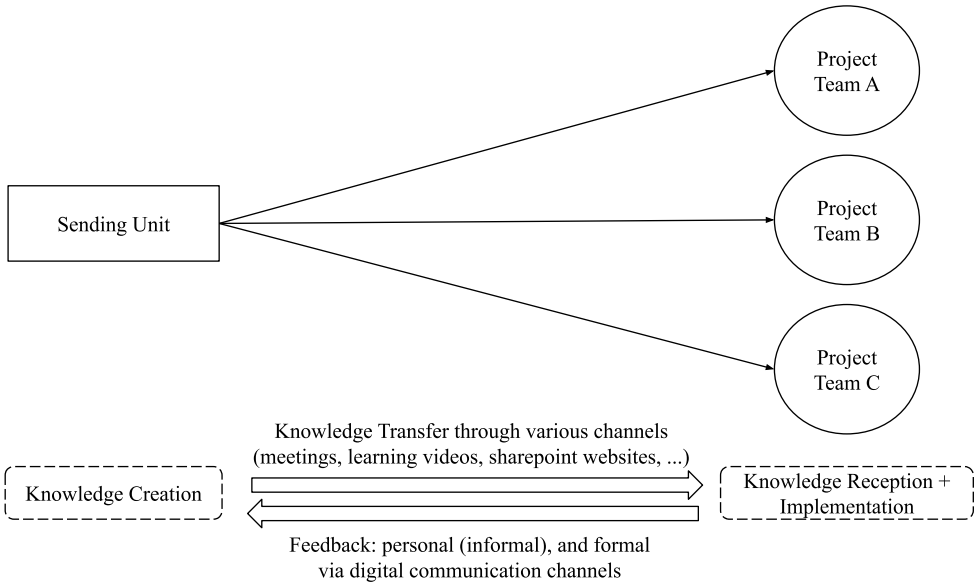

Figure 6: Background of the Case Study, compiled by authors

The project team members were either given the mandate to participate in these project teams or voluntarily applied for a position. Prior experience in the knowledge field, specifically data-related expertise, was usually a staffing criterion. The project teams received the knowledge through the above-mentioned channels, often during initial phases in which they closely worked together with the sending unit. The project teams were set to become more

self-autonomous in the implementation phase, which resulted in less interaction with the sending unit. The knowledge implementation phase in the project teams comprised the application and use of tools, the incorporation of the data strategy and the strategic work into their processes and routines, and also the additional transfer of that knowledge and how to implement it to a wider audience (hereafter labelled as stakeholders), mainly other employees from the members' respective line organisations. The stakeholders were expected to interact with and use the tools that the project teams were in charge of.

4.2 Individual Determinants on Knowledge Implementation

Individual determinants imply aspects or factors that affect the implementation of knowledge on an individual level. Individual determinants are split into *Prior Experience, Strategic Fit, Alignment with Operations, Intrinsic Motivation, Extrinsic Motivation, Time, Prioritisation, and Perception of Learning Activities.* To increase the reader's understanding, each determinant will be further explained in each individual section.

4.2.1 Prior Experience

Description of determinant

This determinant features the respondents' prior experience within the field of knowledge, which in this circumstance implies knowledge related to data strategy. Prior experience includes the respondents' previous roles and expertise in data strategy or related fields.

Empirical findings

Several of the respondents mentioned their previous experience and interaction with data as either an influential factor for taking an active and engaging role within the team or as an important background for understanding the role of data within the organisation. The majority of project team members came from line organisations found in related business fields to their project team. It was emphasised that this arrangement gave the respondents a prior knowledge-stock that helped them in their work in the project team. For instance, the respondents' previous experience with data motivated them to engage in a more active way in the team as they have reached a level of competence and experience within the field before joining the project team. To exemplify, prior experience in data strategy gave many respondents a better understanding of the alignment of the theory with the tasks in the project team.

One of the project team members especially expressed how prior experience could be important when joining a project team as the individual would have to take an active role in engaging and understanding their tasks as there could be difficulties in getting support from the rest of the team in understanding the knowledge. As the majority of the members in the project teams were engaged in other departments as well, there were several aspects mentioned such as lacking proximity in the team and time constraints that decreased this sort of interaction in the team. This was emphasised to result in that the individual needed to learn by themselves at occasions. By having prior experience in the knowledge field, the project team members could more easily understand the knowledge and align it with their operations and routines. Since the team members sometimes felt left alone in their learning processes, much emphasis was on individual motivation to engage in the team. It was emphasised that prior experience increased motivation among the respondents to engage in implementing the knowledge, because it was easier to learn and apply.

"I also think they don't know what I don't know, and I don't know what I don't know either. Sometimes if you're lacking in foundation, you don't even know what is missing, until you go up and run by yourself. " - Project Team Member C1

In addition, the sending unit expressed how the receiver's prior experience could be an influential factor for the implementation of the knowledge as it increased understanding of the content and its application. One respondent from the sending unit emphasised that they observed that the previous skillset that the project team members possessed from prior experience in the knowledge field, influenced their ability to understand and transform the knowledge and implement it into their processes.

4.2.2 Strategic Fit

Description of determinant

This determinant features the respondents' view on the strategic fit of the transferred knowledge. The strategic fit implies how the respondents of the receiving units perceive the alignment between the holistic data strategy that they are learning about, and their previously existing personal or department data strategy.

Empirical findings

The perceived strategic role of the transferred knowledge, including the strategic data-framework and the tools, was strongly emphasised to be a deciding factor for the degree of implementation of the transferred knowledge. One of the reasons for this connection was each project member's individual perception of the role that data played in reaching the company's strategic goals. Several respondents expressed how addressing a strategic approach to data was one of the key objectives. Instead of silo-thinking where each department of the firm just acts on its own behalf without incorporating the organisation-wide lens, the new strategic approach was more holistic and broke down these silos. As a result, several of the respondents emphasised strategic fit as a motivating factor for engaging in their project teams as they could see that there was value behind the tasks and the knowledge. For instance, one respondent emphasised that this had inspired them to become a manager of a project team in this context. Therefore, if the knowledge was perceived as highly valuable from the respondents' perspective, it showed to have an effect on their respective motivation to work with it and implement it. For instance, the knowledge was emphasised to be valuable for the rest of the organisation which motivated the respondents to implement the knowledge in their daily practices. Furthemore, one of the respondents expressed that this was also a facilitator for them to push the knowledge and application of it within other parts of the company, i.e. to forward the knowledge to the project team's designated stakeholders.

"For me it is an important programme. That's why I took the challenge to lead this part. It is important for the company because we are supporting one of the base needs when we are talking about data" - Project Team Manager B1

As the project teams consisted of team members where the majority of them were also engaged in other departments, the strategic fit of the knowledge taught in the project teams and the extent of its alignment with the strategic objectives in their line organisations showed to have a substantial influence on the team members' motivation to learn and implement the knowledge.

Despite that the respondents could see strategic fit theoretically, they emphasised challenges in seeing the link with the practical implementation. Thus, the knowledge itself showed to have strong relation to the strategic fit, but the practical implementation faced areas of improvement. For instance, creating tangible and concrete value with the knowledge

was expressed as difficult. As a result, the respondents encountered difficulties in seeing how the tools could provide results to reach the strategic goals.

The somewhat misalignment between theory and practice regarding strategy was emphasised to have an impact on the project team member's motivation. One of the respondents expressed that they had difficulties in seeing how the current usage of tools and the knowledge could help the team to reach their strategic objectives.

"Often it felt a little bit like yes we're doing this theoretical activity, a lot of data lineage, and a lot of documentation, but there was no real concrete outcome that I could show to my manager 'hey this activity has helped us to achieve XYZ', yeah and they [the sending unit] need to strengthen that a little bit I think, otherwise they will they will start to lose people or lose people's motivation." - Project Team Member A1

4.2.3 Alignment with Operations

Description of determinant

This determinant features the respondents' opinions on the fit of the transferred knowledge into the daily operations in the project teams. In contrast to strategic fit, which takes a more theoretical standpoint, the alignment with operations implies how the transferred knowledge is aligned with the daily tasks and objectives that the project teams face in their operations. Thus, this determinant includes how the receiving units perceive how the knowledge can be implemented in their daily operations.

Empirical findings

Even though several of the respondents emphasised the importance of implementing the knowledge into the daily operations, several respondents expressed difficulties in how to do it practically. One of the respondents expressed that it was the transmission that was challenging, to translate the acquired knowledge into their daily activities and processes. Several respondents shared this perception and it was pointed out that the transmission from theory to daily practice was a difficult task. The difficulty as previously mentioned was not in the knowledge itself, or the theory in this sense, but it was how to practically implement it. The learnings were rather general, as it was the same learning material for all project teams. The respondents therefore perceived it as difficult to translate these rather theoretical learnings into their respective operations, which affected how much knowledge was implemented.

"The challenge is translating it into everyday realities." - Project Team Member A1

The respondents were required to find the link and the fit with their daily operations and therefore to align the learning to the characteristics of their work environment. This work environment however was different from project team to project team, as they all have different backgrounds, for example sales or product development. This "one-size-fits-all" approach by the sending unit therefore opposed the project teams with challenges.

"Not that the content was tough because of course it was clear and understandable, but how it is linked, how it is related to our daily activities. So what was difficult is what we learned about the theory, how can we implement it in the daily practice." - Project Team Manager A1

4.2.4 Intrinsic Motivation

Description of determinant

This determinant features the intrinsic motivation of individuals in the receiving units and how it can affect the implementation of the transferred knowledge. The determinant includes how the project teams engage with the knowledge and the tasks in the team, how willing they are to engage in the team, and what drives them intrinsically.

Empirical findings

Several respondents acknowledged the value that the transferred knowledge has. These perceptions and opinions were connected with the respondents' intrinsic motivation to work within data strategy and to contribute to change. One project team manager exemplified how intrinsic motivation of the team members helped to overcome barriers that were observed during previous learning activities in another company, where this manager acted as a knowledge sender. The manager emphasised that during KM work at the previous workplace, convenience and resilience were major problems that they observed from a sender's perspective. Convenience was described as that employees were stuck in their routines that have proved to be successful, and as a result these employees did not engage in knowledge implementation to a sufficient extent. This attitude made those employees resilient to KM activities. However, the manager did not see convenience and resilience as affecting knowledge implementation in this case study's setting. By allowing the team members to engage in tasks that they showed interest in, the respondents developed an internal drive, as it

kept them motivated in striving for a constant improvement for their own sake. This intrinsic motivation to learn and to improve, and the employee's affinity towards data as the knowledge field, therefore facilitated knowledge implementation activities in the case setting.

"Because they are data-savvy people. So they are very into data and they want to learn new tools, new things, they enjoy it." - Project Team Manager A1

It is being perceived similarly by another project team manager, who saw intrinsic motivation as a contributing factor to the project team work. Knowledge implementation activities take time, a scarce resource in the studied case. The respondent acknowledged that often personal time is necessary to fulfil their tasks. This dedication was however not perceived as something negative, as it provided meaning to the manager and the firm. Due to that intrinsic motivation, team members were therefore willing to engage with personal time, to ensure success of the implementation of data strategy, tools, and framework in daily operations.

4.2.5 Extrinsic Motivation

Description of determinant

This determinant features how extrinsic motivation affects the receiving unit's degree of knowledge implementation. In comparison to *intrinsic motivation*, extrinsic motivation is perceived as motivation that comes from outside the individual, such as career opportunities, promotions, or monetary rewards.

Empirical findings

Some respondents mentioned that the project team dedication lacked extrinsic motivation, such as a clear career path within their project teams, or promotion possibilities. This resulted in less engagement in the project team as the respondents valued their work in their respective home department higher. Since the project team members needed to dedicate time to the tasks and knowledge implementation, they needed to decide what part of their line organisation's work they somewhat would neglect. When the team members then needed to prioritise their work, one decisive factor of what to prioritise was the individual career opportunities that came with each task. As these career opportunities were limited, the team members saw less need to prioritise the project teams. Contribution to the project team was even perceived as a risk, because it limited personal career opportunities in the respective line organisation and did not offer an adequate substitution to it. The respondent further wished

for more career opportunities to increase dedication to the project team. It was emphasised that a clear vision of what sort of promotion opportunities or monetary benefits can be expected, would inspire people to participate in project teams and their knowledge implementation activities, because it would give them an individual, extrinsic reward.

"Career, what career? If being a [project team member] had a career in [the company]? I'm being very pointy on this question because I'm taking a risk to work in data strategy. [...] You know, [the company] has the job stages and a proper career path. None of this exists within the data strategy today. [...] There's no career inspiration for people working in data strategy. [...] If I work on data strategy, what's my next move? Can I participate more? Is there a career path for me to align to? None of those exist." - Project Team Member B1

Many other respondents, however, did not perceive a lack of extrinsic motivation as negatively affecting their contribution to knowledge implementation practices, mainly because they were so intrinsically motivated.

4.2.6 Time

Description of determinant

This determinant features the sending- and receiving unit's opinion on the allocated time the project teams have in order to successfully complete their tasks and objectives, including the implementation of the knowledge into their daily operations. As previously mentioned, the majority of the individuals in the project teams are only committing a part of their working hours to the project teams. This determinant aims to collect the empirical findings on how this aspect of part-time engagement affects the knowledge implementation.

Empirical findings

To ensure sufficient resources for the project teams, including acquisition of knowledge, implementing that knowledge and exercising the team's processes accordingly, the project team members were supposed to commit between 20 to 30 per cent of their total working time to the project team. The majority of the respondents argued that this time was difficult to dedicate, resulting in challenges in the implementation of the knowledge as a project team member, because they were lacking time to do it. The difficulties in allocating the right amount of time were expressed as a consequence of the workload the respondents experienced in their line organisations and that the total amount of workload could quickly

increase and become a liability as the respondents could fall behind in their different tasks. These time constraints were further mentioned as a concern for the respondents' learning capabilities, as they expressed difficulties in allocating the needed amount of time for the learning activities. It was noted that the challenges in implementation were due to the lack of adequate time for tasks within the project team. The project teams expressed concerns that the implementation could be negatively affected since it was not carried out fully or there was not sufficient time to engage in learning activities, because the team members were so busy in their line organisations.

From a managerial perspective, the time constraints were emphasised to create additional challenges as the manager had to account for the workload that each team member faced in their line organisation and adjust the tasks and time available in the project team accordingly. This could be particularly problematic if the project team manager was not also the manager of the team member's line organisation. As a result, the manager lost the ability to be flexible, including scheduling tasks and time set for the project team. For instance, one of the team members was assigned more work in their line organisation and as a consequence, the dedication of that project team member decreased and made it challenging for the project team manager to hand out tasks as they had little insight in the workload of the team member's line organisation.

The manager further elaborated that to solve the challenges of time allocation, much more dedication and time would be necessary to fulfil the tasks in the project team. The currently intended dedication of 20 to 30 per cent did not give justice to the complexity of sufficiently implementing the knowledge and more working hours were necessary and resulted in less engagement.

"I'm not saying that it would require a full time employee, but 50 per cent would be realistic if I [...] really would put my efforts into it." - Project Team Manager A1

With the absence of adequate time to engage in the tasks in the project team, several of the respondents emphasised that commitment of more than the overall contractual agreed working hours was necessary to meet the required objectives and carry out the tasks in the project team sufficiently. Otherwise, some areas would be affected negatively such as learning activities or tasks not performed thoroughly by the team members.

"[...] I think most of us had that work in addition to their already 100 per cent [...]" - Project Team Member A1

The challenges that time constraints created, including not being able to keep up with the workload and additional working hours, was something that the sending unit was aware of. With feedback sessions and weekly interactions, the sending unit could get an overview of the challenges in the project teams. The sending unit emphasised that a lot of the challenges were linked to the setting of the project teams. The setting of not working full time as a project team member brought the challenge of managing the tasks in both line organisation and project team. As the project teams are set to become independent as they become mature, less interaction with the sending unit takes place which also creates challenges for the sending unit to what extent they can affect these issues in the project teams. The sending unit emphasised that they needed to make some judgments on how much influence they should have on the project teams without affecting their independence.

4.2.7 Prioritisation

Description of determinant

This determinant is related to time and it features the receiving units opinion on prioritisation of either project team work or line organisation work, resulting from the setting of the project teams, which implies the set amount of working hours and part-time roles. The determinant includes how these aspects can be attributed to prioritisation and how this can affect knowledge implementation in the project teams.

Empirical findings

Many of the respondents expressed the expectation of incorporating the project team's activities into the line organisation schedule as challenging. The respondents indicated that the need to prioritise between their departments, negatively affected their ability to engage with their project team and achieve their objectives. For instance, the respondents needed to choose what task to focus on according to its importance and a lack of commitment to the project teams was expressed. As a result, some tasks were not fulfilled and knowledge implementation activities were limited. It was further stated that more resources were necessary to comply with the project team's tasks. In addition, it was also expressed that the mandate to participate in a project team did not sufficiently reduce the tasks and obligations from the line organisation.

"It is difficult to prioritise it, so I don't think anyone of us spends 30 per cent. And I don't think that's realistic for anyone working at [the company]. I mean usually people are already at 100 per cent. I think if you want proper commitment and something like 30 per cent you need to staff up, you need to bring in additional resources." - Project Team Member A1

Prioritisation issues could be related to the set up of the project teams. In the occasions where the project teams had a more homogenous group with team members and manager usually residing in the same line organisation, prioritisation became a minor problem. In cases where the project teams were staffed with team members residing in different line organisations, prioritisation could become an increasing issue. Managers expressed difficulties in aligning workload or schedule of the team member's different departments. This was due to the reduced insight the manager of the project team had into their team members' line organisations, if they were not part of the same team and line organisation.

4.2.8 Perception of Learning Activities

Description of determinant

This determinant implies how the receiving units perceive the learning activities that have been created and shared by the sending unit. The learning activities include the interaction between the sending and receiving unit where the transfer of knowledge takes place, including different interactions between the teams and on the e-learning platform with several learning modules. These learning activities are expected to give the project teams the information and basics needed for the roles and the tasks. When the knowledge receivers finished the learning modules on the e-learning platform, an assessment was conducted that was followed by a certification handed out through a firm-external party. *Perception of Learning Activities* is a pattern found in the empirical findings on how these learning activities are perceived and how they can affect the knowledge implementation.

Empirical findings

The perception of the learning activities varied between the respondents. Some of them expressed how the learning modules really provided value and helped them in understanding their role and their objectives. With clear steps and guidance on how to carry out tasks, it was easy to understand and gave the team members easy access to go back to certain areas in the learning modules while they were conducting tasks in the project team. In addition, one of the

respondents also expressed how the modules could provide insights and guidance into which areas the respondent possessed limited knowledge so far or show potential areas of improvement. It was emphasised as an easy way to refresh the knowledge. As the learning modules were concluded with an assessment, it could show such areas of improvement.

However, this view was not shared between all respondents, especially regarding the assessments that were perceived as having less value for some respondents. This view was influenced by the fact that the most established project teams had already taken similar assessments prior to the ones existing today. As the new assessments were introduced, new certifications were introduced as well, leaving some project team members without valid certification as they had only certifications from the old assessments. This resulted in the project team members having to retake the assessments to become certified in their area. This was perceived as having no value to some respondents as they have already obtained the knowledge in prior assessments and already were certified. This resulted in the resistance of some respondents to interact with the new learning modules and the knowledge.

"The certification doesn't really have a value per se, because we already know how to work in the [Strategic Framework] and using the tools. So I don't think additional certification will buy us anything." - Project Team Member B1

Several of the respondents expressed how the learning modules provided them with various theoretical insights but that there was a gap between the theory and its practical implementation. Some respondents argued that the learnings were too theoretical and lacked input on how to align the rather theoretical knowledge with the respondent's work. An increased focus on how to implement the knowledge into daily operations was asked for by several respondents. Without more practical elements in the learning modules, the respondents expressed that the process could become very monotonous and theoretical. In addition, on some occasions the respondents had to create their own learning environment on how to practically implement the knowledge. This resulted in various degrees of knowledge implementation among the team members as they had to conduct additional learning interactions besides the modules.

"I've missed the bit, you know, the practical side of things [...] first assessment and the knowledge that was behind it, that might have been way too theoretical for my taste" - Project Team Member A3

4.3 Team Determinants

Team determinants imply aspects or factors that affect the implementation of acquired knowledge on a team level. Team variables are split into *Cross-Functionality, Managerial Support, Team Proximity* and *Staffing.*

4.3.1 Cross-Functionality

Description of determinant

The project teams consist of members where the majority of them are residing in different line organisations and have the mandate to participate in their respective project team as an add-on to their line organisation. Consequently, the team members contribute with a distinct knowledge base and set of competencies, because they do not always reside in the same line organisation as other team members. In that way, the project teams become cross-functional. This cross-functionality bears opportunities and barriers to knowledge implementation activities.

Empirical findings

Several respondents emphasised the positive effects cross-functionality has on understanding and implementing knowledge, but also accounted for the drawbacks such a constellation of project teams could have. The drawbacks included the challenges in managing all the team members as they may reside in different line organisations which could create time and prioritisation constraints, both from a managerial and team member perspective. According to one project manager, the competences that team members brought from their line organisations were essential and contributed to the integration of differing perspectives in the project team. They perceived this constellation as being very supportive in how to make use of the strategic models and tools for the team, as the different perspectives positively contributed to the richness of team discussions, because the team members could discuss challenges with aligning the rather theoretical learnings with their operations and look at it from different perspectives. A manager also perceived it as very contributing that different members of the team are looking at things from different angles. It also helped another respondent to incorporate previous work experience into the project team work as these insights and competences were valued by the other team members. The insights and perspectives that were brought up in team discussions are sometimes very related to the other

team members and their prior experience and were therefore expressed as highly interesting and facilitated the view on the knowledge from different perspectives.

Besides these positive perceptions, respondents also pointed out the challenging side of a cross-functional compilation of project teams. One project team member pointed out that it was a difficult constellation because the project team manager did not have any mandate to allocate priorities to that respondent. Another challenge was that the respondent's own perceptions of what should be prioritised, either the line work or the project team work, were less heard because the line organisation manager did not have any insights into the project team work and vice versa.

"I think it would have been easier for [my project team manager] to handle the admin stuff if it would have been his team only because then he would have had a greater mandate on questions like prioritisation and resources." - Project Team Member A1

The cross-functionality of the project teams was further emphasised as challenging to manage. One manager expressed that they had no authority to decide what their team members should prioritise and what not if they had to choose between the tasks in the line organisation or the project team. At some occasions, the managers had reduced insights into their team member's line organisation due to the fact that they were not always managers in these line organisations. With no mandate to prioritise tasks, it resulted in the manager deciding to allocate less and less tasks to the project member that was a part of a different line organisation than the rest of the project team. With reduced tasks in the project team, some team members experienced less opportunities to implement their knowledge.

This trade-off between new perspectives on knowledge and higher organisational and administrative efforts was challenging for project teams. One project team member however argued that for their team it was more important to benefit from the different perspectives and angles of the individual team members than to account for other aspects, such as administrative challenges.

4.3.2 Managerial Support

Description of determinant

Managerial support describes the receiving units' opinion and perception of the role of managerial support in the project teams and how this can affect knowledge implementation. It relates to support from the project team managers.

Empirical findings

Managerial Support was by some respondents seen as a facilitator for implementing the acquired knowledge into their processes and routines. For instance, it was emphasised that a 'pushing' manager was very valuable to drive the implementation, for example by keeping track of deadlines, and to prioritise work in the project team accordingly. Other respondents confirmed that perception and saw the manager of the team as a facilitator for setting direction and sorting priorities. When facing prioritisation issues, there were several of the respondents that expressed how managerial support played an important role to what extent the project member was able to make use of their knowledge and apply it within the team. The manager usually had good insights in the knowledge that the team members possessed and could allocate tasks to each team member thereafter. With clear objectives and interactions, the managerial support helped the project team members to prioritise their tasks. The role of managerial support was especially emphasised by the project team members that had the same manager in both their project team and line organisation.

"He's setting direction you know, at this point in time this is what's important, this is what you're trying to achieve. [..] It's also helpful in prioritisation, because he can then point out what should be of higher priority." - Project Team Member A3

Managerial support was also stressed as a motivating factor for some respondents. It was pointed out that even though certain knowledge implementation activities were sometimes perceived as a waste of time or not giving back any value by project team members, the manager could step in and motivate by explaining why certain things should be implemented and how they will bring value in the mid-term future. The respondents further emphasised that sometimes the immediate value of knowledge implementation was not clearly visible. Leadership qualities could then help the team members to see the long-term value such a change in routines and processes can have.

Some other respondents, however, emphasised that for them managerial support only had a minor effect on their work in the project team and the implementation of the acquired knowledge. One project team member, who was not in the same line organisation as the project team manager, pointed out that the project team manager is very encouraging in obtaining the knowledge, but for facilitating the actual implementation of knowledge there was too little contact between them two.

Managerial support was also perceived as less necessary when respondents had more experience in the field of knowledge. Due to experience, a respondent expressed that they saw managerial support as less important, since they were aware of the tasks and how to implement the acquired knowledge. The same could be observed with other project team members, who had been working in the knowledge field for a long time and did not see the support of the project team manager as influential for the implementation of the knowledge.

"I think his involvement would be needed more if it was junior resources for instance working with him. I know what I have to do and I know what I want to do so I think there is no reason for him to push me or to tell me how I should push it." - Project Team Member A1

From one manager's point of view, the support for the team members for implementing acquired knowledge was important and influential. The manager has been a non-managing team member in another project team before. The experience from another project team within the same strategic field helped to understand what is important for implementing the knowledge. The team manager supported the training and teaching provided by the sending unit with hands-on practical experience towards the team's members by helping them to actually apply what they were learning. The team manager saw the practical learning as a great addition to the rather theoretical training that is provided by the sending unit. If this practical part was lacking, the team manager saw the danger of losing the people in this matter.

4.3.3 Team Proximity

Description of determinant

Another pattern in the data refers to team proximity. It describes the relationship among the members of one project team, how close they work with each other, if they work with each other, and how this affects knowledge implementation. Proximity hereby includes physical, social, and cognitive distance. Physical distance refers to issues such as remote work, working in different countries, or being located in the same building. Social distance refers to shared traits, characteristics, and how employees get along with each other. Cognitive distance refers to the extent of sharing a similar knowledge base.

Empirical findings

Higher proximity among the project team members was generally seen as contributing positively to the team's work, the translation of theory into practice and thus the implementation into the team members' processes and routines.

One project team member supported the other project team members by providing support in practical implementation of tools and strategy. As the theoretical learning could sometimes be challenging for project team members with different backgrounds and expertise, the respondent saw the need in contributing with previous knowledge from related areas to support other team members in the practical implementation. Another project team member emphasised that joint discussions supported the understanding of the knowledge, especially when different perspectives were considered. The team discussions within the receiving unit were thus perceived as a supportive addition to the knowledge transfer between sending and receiving units, which eventually facilitated the implementation. It was further expressed that the size of teams could be a decisive factor for how much expertise and experience about how to implement the transferred knowledge is shared among team members. Particularly in team discussions, the respondent's previous experience showed that the higher the quantity of participants in a meeting, the less engagement there is in knowledge sharing, because the cognitive distance among team members increased. The respondent perceived the current team's size of four members in total as beneficial for fruitful discussions and a facilitator to apply the acquired knowledge, as it allowed for efficient communication and the possibility to build relationships with other team members.

Another respondent perceived the role of being a team member as an obligation to support other team members. One team member emphasised that they were pushing other team members and educated them to contribute to the team members' understanding. To increase the understanding of other team members therefore helped them to implement the knowledge at a later point into their operations. This mutual teaching and learning was a consequence of a high level of cognitive proximity between the team members.

Collaboration between team members was further facilitated by the relationships that individuals had. Project Team Member A2 emphasised that the amount of time the team members have worked together in their line organisation before participating in the project teams led to better collaboration, because they knew how each other worked, they have become familiar with each other, and have developed a mutual understanding of each other. This close relationship contributed to the respondent's motivation to work in the project team

and pushed their contribution and dedication. The respondent saw the clear advantages that close relationships could have on team mechanics and joint learning.

"[...] they just brought some friends together and put them in a team. [...] I think we had it nice because we know each other, we know our relationships and how we are as persons. So it helped us a lot. [...] even if you have a boring task or a fun task, you are still understanding the process, you want to complete it with good results, so it helps a lot." - Project Team Member A2

One project team member, who just recently joined the project team, saw the support of team members as critical in the process of implementing the knowledge into the respondent's routines and processes. A decisive aspect for what makes it challenging, was remote work and physical distance to other team members. Being new in a project team with only limited prior experience in the knowledge field made it challenging to translate the acquired knowledge into one's routines and processes while working remotely. Especially in the beginning of the implementation process, a lot of questions were asked, clarifications were needed and best-practice examples were desired by the learner. The setting of hybrid work or even totally remote work, and therefore physical distance between the team members, could also lead to a cognitive distance. It was expressed as being a child who is constantly asking questions and "nagging" at other team members. When team members shared a physical location, such as the same building or even the same office, they could search for immediate clarification for any obstacles with how to align the learnings with their operations and routines. In a remote work setting, this became more difficult. In this scenario, team members always had to overcome a certain threshold, for example, to pick up the phone, write an email or use instant chat software. When sitting in the same office, team members saw how busy colleagues were at the moment and could get a feeling for when clarification questions might be appropriate. This became more difficult in a remote work setting. The respondent did not want to bother other team members too much. This prolonged the period of "getting it up and running" (Project Team Member C1). The project team member usually did not have any problems with remote work. However, this was the first time that the respondent was doing new tasks and acquiring previously unknown knowledge while working remotely. Other respondents that also started their work in the project teams during the pandemic-related work-from-home period, did not express any major effects of physical distance to their work

in the project teams. It was emphasised that the challenge of remote work was the lack of previous experience in data and related activities in the company.

4.3.4 Staffing

Description of determinant

'Staffing' refers to a category of observation in the data that describes how the project teams are staffed. It refers to two staffing related situations, firstly voluntary participation or being given the mandate to participate in the project teams, and secondly to having the same line manager and project team manager.

Empirical findings

The team members were selected to participate in the project teams through either being given the mandate from a manager, or a more voluntary choice of joining the project team of one's own accord. Some project team members were picked by the respective project team manager. This decision was based on the tasks the respondents were conducting in their line organisation, because they were data-related and the team members therefore had a certain pre-existing knowledge about data. This involuntary participation in the project team did however not have any influence on the respondents' motivation or dedication for the project team work. One respondent attributed this mainly to previous experience and general interest in the data field. Being given the mandate to work with the project teams therefore did not have any effect on motivation of the respondents to contribute to knowledge implementation activities.

The respondents also mentioned that it was beneficial to have the same person as line manager and project team manager. In that case, it was easier to sort priorities between line organisation and project team, because the team managers knew the priorities of their teams and line organisation and got a holistic picture of upcoming deadlines and general priorities. In addition, it facilitated discussion around practical implementation of knowledge, since the manager and the subordinates usually had a similar knowledge stock, which facilitated discussion about, for example, how to align the knowledge to certain department-specific strategies, complex systems, routines, etc. With a differing knowledge stock between team member(s) and team manager, it became more difficult and also time-consuming to discuss the translation of the learnings, which were usually rather theoretical, into the operational implementation and how to use it on a daily basis.

4.4 Socialisation Determinants

Socialisation variables affect the implementation of knowledge on an inter-team level. They are therefore based on the relationship between the project teams and the sending unit, but also between the different project teams. Socialisation variables are split into *Proximity between Sender and Receiver, Feedback* and *Collaboration among Project Teams*.

4.4.1 Proximity between Sender and Receiver

Description of determinant

'Proximity between Sender and Receiver' was a pattern found in the data that relates to the relationship between sending unit and project teams. Similar to team proximity, proximity between sender and receiver includes physical, social, and cognitive proximity. Proximity also includes the level of support and guidance that the project teams receive from the sending unit. As mentioned earlier in the case study background, knowledge was partially received during personal meetings and face-to-face training sessions. Beyond that, project teams receive support from the sending unit in their learning and implementation processes and are guided when unclarities or questions occur.

Empirical findings

The effect of a close relationship between the sending unit and the project team members was generally seen as positive and contributing to the degree of knowledge implementation. Project team members described the situation as being a valuable relationship with weekly meetings, where the progress was discussed and knowledge was exchanged on a mutual basis. This was perceived as a facilitator for the knowledge to be aligned with the daily operations of team members. Among the project teams, several of the team members including the managers stressed the importance of support and guidance from the sending unit. Even though the teams expressed that they were aware of the expected goals and objectives, occasions arose when guidance and push from the sending unit was still needed. Often, this was because the teams lost focus on the project team work, because they had upcoming deadlines or other priorities in their line organisation. Guidance by the sending unit then somewhat aligned the focus again and led to more attention to the project team work.

Among the team members of Project Team A, the manager was highlighted to play a contributing role in supporting the sending unit when support and guidance was lacking. In absence of the sending unit, the project team manager complimented the sending unit by

taking a supportive role towards the other project team members. Usually, the more mature the project teams become, the less support and guidance is provided by the sending unit. However, for some occasions, close collaboration and support from the sending unit was still perceived as necessary. In those situations, it appeared to be important that the project team manager could substitute for the lack of support and guidance by the sending unit.

It was further emphasised that personal support and guidance of the sending unit is necessary as an add-on to the existing digital training, learning videos and other non face-to-face learning materials, such as sharepoint websites or presentation slides. Particularly in the beginning, either when project teams were in the initial roll-out phase, or when a new team member joined the project teams. In those scenarios, the amount of knowledge that has to be absorbed was immense, which for some respondents led to the feeling of being overwhelmed and feeling a bit lost. It was therefore difficult to go through the entire digital learning material, to clarify questions or overcome challenges of how to align certain aspects of the knowledge with the respondents' routines. Another project team member further emphasised the importance of having personal contact for learning and implementation practices. Particularly when it comes to practical implementation and the transformation of the learnings into the day to day operations, collaboration with experts was perceived as important, as the project teams had the possibility to get back to the sending unit with potential questions and need for clarification. Personal support by the sending unit could then help the project team members in different ways. Firstly, it saved a lot of time for the project team members to not have to look through lots of learning materials, or watch entire learning videos once again. Secondly, it facilitated the transformation of the knowledge into the respondents' operations, because detailed questions could be asked and challenges could be explained, for which solutions were then found mutually.

"[Sending unit] can give that higher level insight so that we all understand what the goal is. And [Sending unit] also helps a lot, especially because I'm just starting out to understand how to work in the tool. For me I find that super useful because I know that there are tons of videos and training stuff available in our [Instant Message Chat] channel. But when I just need a quick answer to questions, I don't have the time, you know, to look through 60 minutes of videos, so it's nice to have that support available." - Project Team Member A3

Proximity to the sending unit further showed to have strong implications on the individuals' motivation to implement knowledge. This was especially observed with respondents that

have been working in the project teams for a longer time. It was stressed that the support and guidance from the sending unit is vital to push the project teams in their work. This showed to be of special importance when the project teams were facing challenges in the knowledge implementation due to lack of motivation. This lack of motivation can occur because some parts of the project team work were perceived as less exciting. On these occasions, the sending unit can push the project teams. It is important that the sending unit then reminds the project teams that in order to reach their goals, being the implementation of strategic tools, frameworks and procedural change, less exciting tasks need to be performed as well.

"It becomes that cumbersome thing, that even after two years in, you still have those standing meetings, you still need to perform these, I call it boring tasks, but still you do it, because you know it is important, because at the end of the rainbow, all of your efforts will be awarded somewhere. Still the most important thing from the [sending unit] is to make sure [...] that people understand that, because if they lose that kind of nudge or push into the [project teams], we can just drop it and do monthly reports but not do any work really. - Project Team Member A2

Similar to the difficulties of working remotely when it comes to proximity among team members, remote work was perceived as hampering the collaboration between sending and receiving units by one respondent. The physical distance, which involved the usage of digital communication tools, was perceived as a barrier for informal and quick clarifications for questions on how to implement the knowledge or how to use the tools.

Besides the positive perception regarding proximity between sender and receiver, it was by some respondents also perceived as a negative aspect as it takes time and only further reduces this scarce resource. One respondent pointed out that the sending unit does not possess sufficient expertise in how to practically implement data strategy, framework and tools, but rather only knows the theoretical and strategic perspective. As a result, the project team member was required to become a teacher themselves in mutual meetings and explain what the requirements of practical implementation are, which was perceived as unnecessary and time-consuming.

4.4.2 Feedback

Description of determinant

The feedback process includes informal and formal methods of communication from the project teams to the knowledge sending unit. The methods of sharing feedback cover personal communication, instant message chats, and rather formal sharepoint websites with possibilities of feedback communication.

Empirical findings

Among the project teams, the opinion on the feedback process showed some different perceptions. The majority of the project team members expressed that they perceived the process as open and helpful in implementing the knowledge. The feedback process was especially expressed as influential in creating motivation as the respondents could feel that they were being heard and that they could see results in better ways of implementing their knowledge to their tasks in the team. When, for example, feedback was given about tools or other parts of the knowledge, and suggestions were actually implemented by the sending unit, it increased the teams' motivation to implement it into their daily operations because it was now better aligned to their work. Thus, respondents saw the feedback as an important step in implementing the knowledge as the feedback sessions allowed for room for clarification of the knowledge and how to apply it, and also as an increase of motivation.

"I mean we could really see the changes. So sometimes it was very technical things like the tool not working the way we wanted to work, and some of our suggestions were implemented. Definitely, at least for me, that was very motivating." - Project Team Member A1

However, this view was not shared entirely between the teams. Some of the respondents felt that the feedback sessions could leave them with the feeling that they were not heard, for example when project team members gave feedback on areas for improvement and the expected changes were left out. As a result, the implementation of the knowledge could get negatively affected as the respondents could not see their requested changes or clarifications on the tools or the knowledge to be addressed.

4.4.3 Collaboration among Project Teams

Description of determinant

The last pattern found in the data refers to the collaboration among the project teams. As introduced in the background at the beginning of this chapter, there was not only one project team that received knowledge from the sending unit, but about thirty project teams with different backgrounds. It was therefore highly interesting to observe, if and how the collaboration among project teams affected knowledge implementation.

Empirical findings

Collaboration among project teams only occurred to a limited extent in this case study setting. If any collaboration occurred, it was mainly between project teams that were based in the same or a similar company organisation, for example project teams that were based in different parts of the sales organisation or different parts of the product development organisation of the firm. There was no mandate from the sending unit that required collaboration among project teams. Usually, the teams learn, work, and implement knowledge separated from other project teams. Informal collaboration mostly took place by the initiative of project team managers or members, who knew other teams' members or managers from previous collaboration in their line organisation. The collaboration initiatives that existed were however perceived as helpful for clarifications of question and discussion on how to implement the knowledge into the daily operations. One respondent identified that other project teams have the same challenges regarding the practical implementation of knowledge and alignment with their respective operations. The teams could share their knowledge about these challenges and profit from other teams' solutions.

"[it leads to] experience sharing between us. Like 'How did you do this or why do you have that? How did you perform these activities?' [...] a relationship between one or two [project teams] that are closely related to what you are doing helps a lot." - Project Team Member A2

Formal meetings and channels for knowledge sharing to foster implementation would have been appreciated, particularly in the early phases. One digital meeting per week available for all project teams and their members as well as the sending unit was scheduled, with voluntary attendance. One respondent however saw only little value in formal sessions. Because of the formality in the form of weekly meetings, these meetings tended to be more theoretical than actually regarding practical implementation. One of the reasons for this was that there was

often only a limited overlap of the areas of application among the different project teams. Additionally, in theory such collaborations would certainly be helpful, but in practice they would not succeed because they would only further constrain the respondent, as there would be even less time available and such meetings would consume enormous resources.

"[...] it would take more time from me, and I don't have time." - Project Team Manager A1

5 Analysis

In this chapter, the empirical findings from chapter four will be analysed and discussed based on the conceptual model from chapter 2.3. In regard to the purpose of the study and the research question, this chapter will enhance the understanding of how project teams affect knowledge implementation. The analysis chapter is separated into three parts. Firstly, the relationship between the identified determinants from chapter four will be analysed. Derived from the empirical data, a separation between determinants that have a direct effect on knowledge implementation and determinants that have an indirect effect on knowledge implementation is made. Secondly, the analysis of direct and indirect determinants will be interpreted in the holistic picture of knowledge management and existing literature will be developed based on the findings. Thirdly, a revised conceptual model will be presented, incorporating results and new insights from the analysis.

5.1 Direct and Indirect Determinants of Knowledge Implementation in Project Teams

Derived from the conceptual model and the empirical data, three categories of determinants of knowledge implementation in a project team setting were identified: *individual*, *team*, and *socialisation* determinants. Critically analysing the data, for example 'prior experience' and its effect on knowledge implementation, demonstrates an important issue. The data show that instead of 'prior experience' directly affecting knowledge implementation, it rather affected both the intrinsic motivation of respondents and the ability to align the knowledge with the respondent's operations, which in turn directly affected knowledge implementation. This connection however only becomes evident when viewing the empirical data holistically. The researchers therefore argue that a separate and individual consideration and analysis of these three groups does not account for the holistic picture. Rather, they have to be considered in the overall context, as they relate to and have noticeable effects on each other. The data show that the identified determinants were affecting knowledge implementation in different ways, either directly or indirectly. The following analysis is therefore structured in determinants that have a direct effect on knowledge implementation and determinants that have an indirect effect on knowledge implementation. This relationship is illustrated in Figure 7. Indirect determinants affect direct determinants, and these in turn affect knowledge implementation in a project team setting.

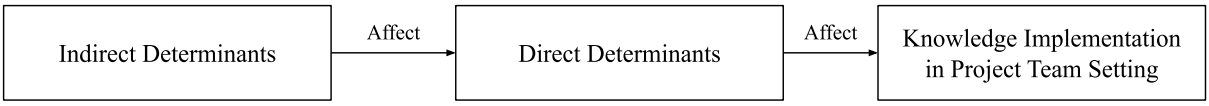

Figure 7: Relationship between Indirect Determinants, Direct Determinants, and Knowledge Implementation in Project Team Setting, compiled by authors

The following part of the analysis argues for which and why some determinants have a direct effect on knowledge implementation, and why other determinants found in the empirical data have an indirect effect on knowledge implementation. The direct determinants are *intrinsic motivation*, *time*, *prioritisation* and *alignment with operations*. Related to each direct determinant, an analysis on how various indirect determinants are related to that direct determinant will be presented. To illustrate, Figure 8 below shows the determinants of knowledge implementation that have been identified in the empirical chapter, grouped into direct and indirect determinants. The relationships between each determinant will be elaborated in the following subchapters. To facilitate this, each direct determinant will be addressed in their respective subchapter together with its related indirect determinants. Each subchapter will be summarised by a figure illustrating the relationship between the indirect and direct determinants and knowledge implementation.

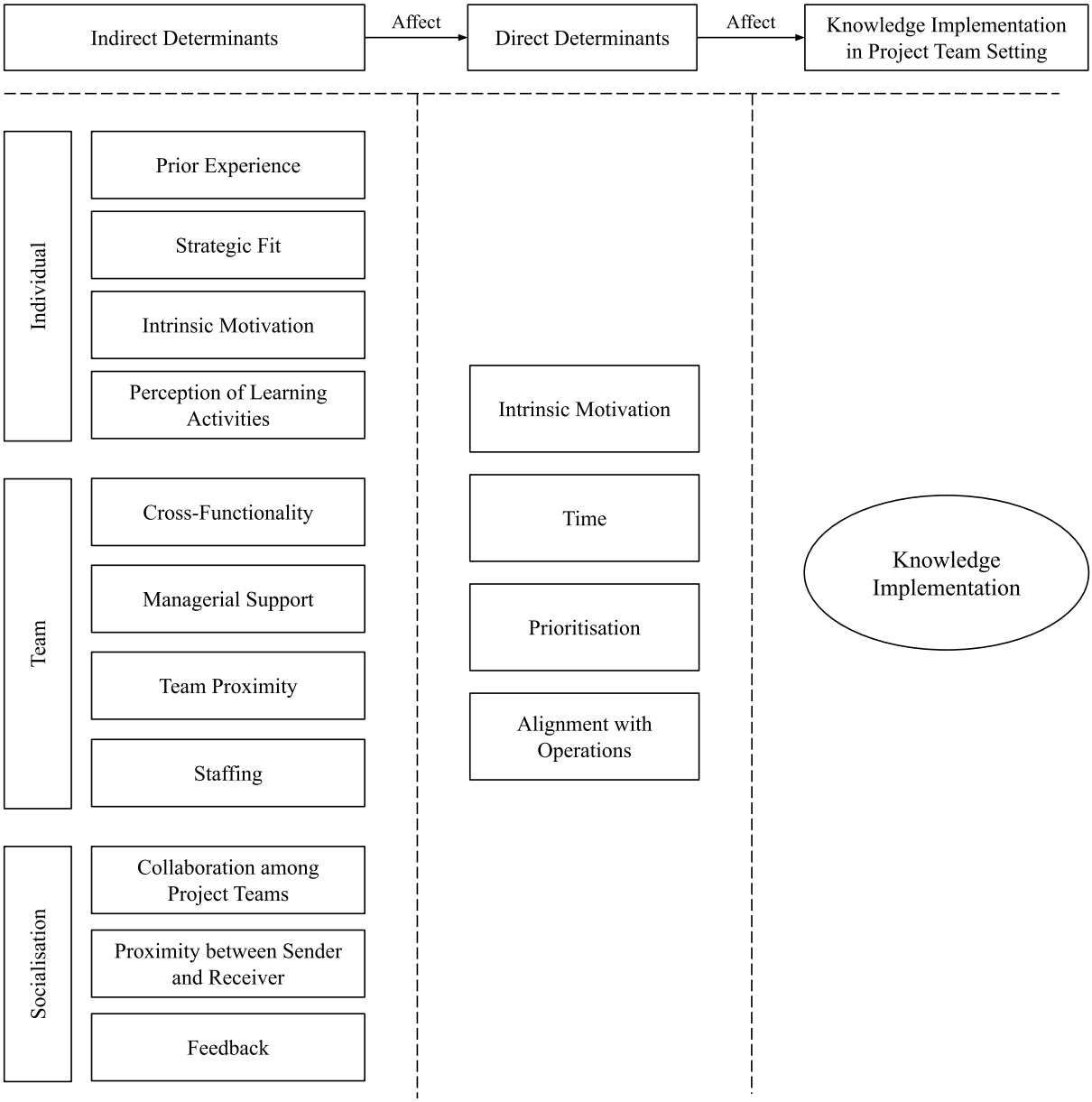

Figure 8: Structure of the Direct and Indirect Determinants on Knowledge Implementation in the Case, compiled by authors.

5.1.1 Intrinsic motivation

5.1.1.1 Direct

Intrinsic motivation describes the motivation of employees to conduct an action without expecting any external rewards, such as promotion, monetary benefits, or reputation. Rather, it satisfies one's own needs without any, often monetary, compensation from someone else (Osterloh & Frey 2000). The empirical data show that intrinsic motivation of knowledge receivers is critical for the degree of knowledge implementation. These results confirm the assumption by Minbaeva et al. (2003), that higher motivation of knowledge receivers leads to

greater RACAP, and thus a higher degree of knowledge implementation. However, it is necessary to distinguish that Minbaeva et al. (2003) tested the overall motivation of a subsidiary's employees, while this study focuses on individuals' motivation. The findings therefore further develop this theory by incorporating the individual perspective. The significance of intrinsic motivation for successful knowledge transfer has further been emphasised by Osterloh and Frey (2000), who argue for motivation management as a competitive advantage, since it affects the degree of knowledge implementation. Szulanski (2000) found that lack of motivation potentially leads to rejection of knowledge implementation. Gupta and Govindarajan (2000) argue that motivation of the receiver is characterised by the Not-Invented-Here Syndrome, which implies that target units willingly reject the reception and implementation of knowledge, because it stems from other organisational departments. This phenomenon could not be observed in the empirical data, as argued further below.

5.1.1.2 Indirect

Intrinsic and Extrinsic Motivation

The empirical data emphasised that intrinsic motivation is deeply rooted in the respondents personal interest in the knowledge field. Minbaeva et al. (2003) mainly base the dimension of motivation on extrinsic motivation, implying merit-based promotion and performance-based compensation, besides internal communication. As one respondent confirmed, a lack of career opportunities can lead to a decrease in motivation, therefore in line with the hypotheses of Minbaeva et al. (2003). The empirical data further confirm findings by Wang and Noe (2010), who argue that the relationship between extrinsic motivation and knowledge implementation has in previous studies come up with mixed results, as some authors found that extrinsic motivation has an influence on knowledge implementation, and others did not. A lack of promotion opportunities was only confirmed by one respondent to have an influence on knowledge implementation, other respondents did not confirm this view. Building on this and based on the findings of this study, intrinsic motivation seems to have the greater direct impact on knowledge implementation compared to extrinsic motivation.

Strategic Fit

Intrinsic motivation is affected by the fit of the respondent's own strategy perception and the strategic direction of the new knowledge. This strategic fit and seeing the importance for the company positively influenced the respondents' motivation to take on the challenge of

contributing to the project team and implementing the knowledge. The positive perception of the value of the knowledge for the firm and for individual operations seemed to positively influence the intrinsic motivation of the project team members. Knowledge receivers' positive perception of strategic value might decrease the challenge of the Not-Invented-Here Syndrome (Gupta & Govindarajan 2000; Argote, McEvily & Reagans 2003) and therefore increase the recipient's motivation to implement the knowledge. Similar to this syndrome, Riege (2005) discusses that trust in the accuracy and value of the transferred knowledge is influencing the knowledge receiver, as it determines if and how much knowledge is absorbed. Respondents confirmed that the strategic value of the knowledge was evident. It can therefore be argued that, based on this study's findings, the elaborations by Riege (2005) can be further developed by accounting for the role of intrinsic motivation in the relationship between seeing and trusting the value of knowledge and actually implementing it, instead of only affecting the motivation to absorb knowledge.

Managerial Support and Proximity between Sender and Receiver

The empirics further showed that proximity to both other team members as well as the sending unit had positive effects on intrinsic motivation. For once, the empirical data revealed that the support from and proximity to the sending unit had a major contribution to maintaining a high level of motivation among the knowledge receivers. As the sending unit was constantly showing the 'bigger picture' and pushing the project teams, the team members stayed intrinsically motivated to promote implementation. This could also be observed in the manager's role who acted as a supporting force when the support from the sending unit was absent. Oliver and Kandadi (2006) argue that if KM activities are not promoted by senior management, they will be perceived as a minor issue with decreased value. This argumentation can be applied to the context of this study and further developed by arguing that promotion by leaders, the sending unit in this case, is essential to keep employees motivated to implement new knowledge.

Proximity among Team Members

Proximity among team members also contributed to intrinsic motivation. One respondent argued that working with friends in a team is a motivating setting, which provides further incentives to do a good job and to initiate the relevant process changes through knowledge implementation. Edmondson and Nembhard (2009) describe that the proximity among team members increases motivation through "shared sense of identity, cohesiveness, and purpose"

(Edmondson & Nembhard 2009, p. 129). Mueller (2014) argues for team orientation as facilitating knowledge sharing between teams, as "the performance of a team is better than the sum of all individual performance" (Mueller 2014, p. 192). This approach seems to be also applicable to knowledge implementation, as seen in the empirical data. The feeling of belonging to a team increased the individual's motivation to contribute and perform to the team's benefit. Team proximity therefore showed to have a positive effect on knowledge implementation, because it increased intrinsic motivation of team members

Prior Experience

Prior experience of individuals showed to have a positive impact on the project team members' motivation to engage in their project teams. Prior experience further increased the respondent's openness towards change, as they have been working in the knowledge field for a long time and were always open to improving their processes, which was a natural attitude in the respondents' opinion, that can be referred to as intrinsic motivation. Mueller (2014) identified openness as positively contributing to the level of knowledge sharing between teams. Open team members perceive new learning opportunities as beneficial for improving their routines (Mueller 2014), which increases their intrinsic motivation, an argumentation that is also reflected in the empirical findings.

Feedback

The empirical data further show that feedback affects motivation of team members. The respondents perceived feedback as either positively contributing to motivation through the feeling of being heard and seeing the changes they proposed, or as demotivating as they could not observe this effect. Feedback as an enabler of knowledge sharing through the increasing effect it has on motivation has been widely acknowledged (Hung, Durcikova, Lai & Lin 2011), but, as knowledge sharing implies, largely focused on the effects of feedback on the sending unit's motivation to share knowledge. The results of this study show that the combination of giving feedback and this feedback being implemented by the sender, increases the receiver's motivation to implement knowledge. Therefore, it can be argued that the findings extend existing literature on knowledge sharing and motivation, as they show that motivation is also decisive for knowledge implementation on the receiving side, and not only sharing from the sending side.

5.1.1.3 Summary

As summarised in Figure 9, the findings show that intrinsic motivation of individual team members is highly affecting knowledge implementation. This intrinsic motivation in turn is affected by individual, team, and socialisation determinants, which therefore have an indirect effect on knowledge implementation.

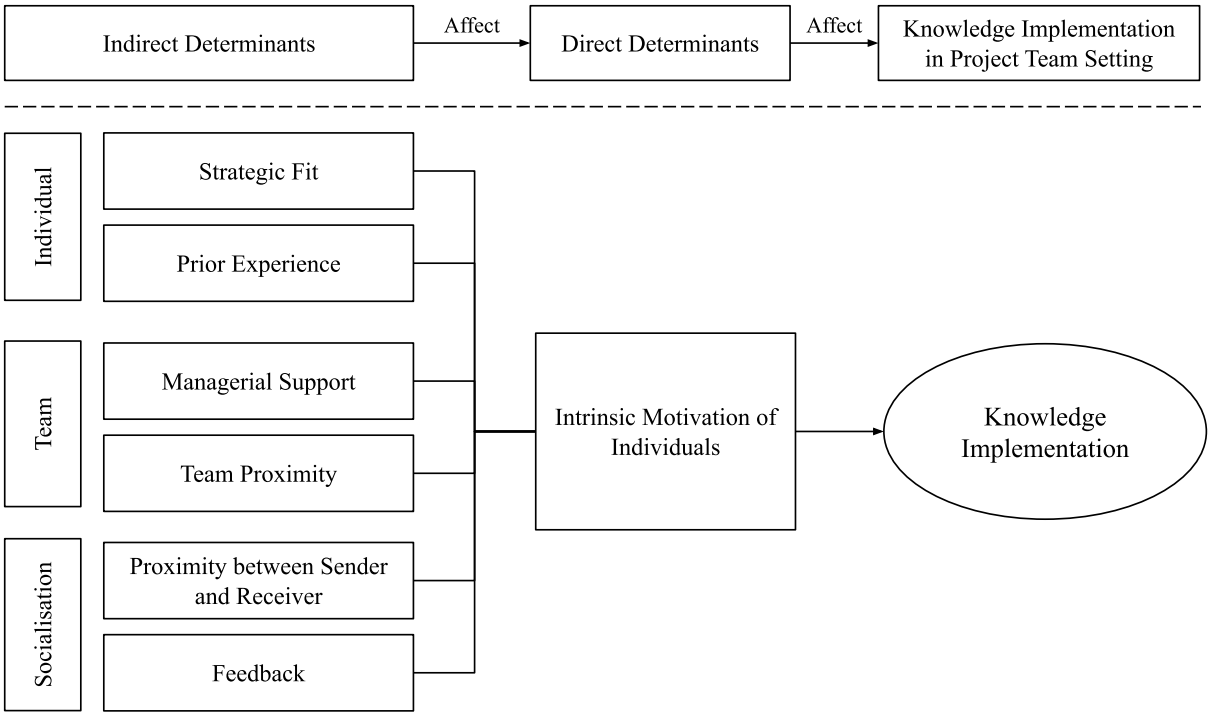

Figure 9: Intrinsic Motivation of Individuals as a Determinant for Knowledge Implementation, compiled by authors

5.1.2 Time

5.1.2.1 Direct

The empirical findings show that the allocation of time represented a major challenge to knowledge implementation activities in the teams. The organisational context further aggravated this challenge. The engagement in project teams were add-on work to the respective employees' work in their line organisation. In the case study, project team members were supposed to deduct 20 to 30 per cent from their line organisation work and contribute with it to the project team work. The practical execution, however, showed significant barriers to this resource allocation. The role in the line organisation usually occupied the project team members fully, therefore making it difficult to simply reduce line organisation responsibilities.

Time allocation for knowledge creation, sharing, and acquisition is crucial for developing a knowledge culture in an organisation. Differences in time allocation was found to be a key influencing factor for differing knowledge habits between employees (Oliver & Kandadi 2006; Riege 2005). Mueller (2014) further motivates for the limited time culture that is represented in today's organisations, where each activity takes time and there is too little time for all activities. She argues that knowledge sharing activities usually require allocation of time, this is however seldomly part of an employee's job description and therefore oppose the employee to a dilemma. The findings of the study further develop this approach. Even though employees have specifically allocated time resources to the project team work, it is still challenging to contribute accordingly. Mueller (2014) found that simply having more time does not automatically increase participation in knowledge sharing activities. This study shows a similar finding regarding knowledge implementation activities, as it was found that there are other determinants (Intrinsic Motivation, Alignment with Operations, Prioritisation) that directly influence the level of knowledge implementation activities as well.

5.1.2.2 Indirect

Intrinsic Motivation

The empirical data show a direct link between intrinsic motivation of project team members and the available time they can contribute to knowledge implementation activities. Intrinsically motivated team members sometimes commit personal time in addition to their 100 per cent workload to commit to the project team which leaves more room for knowledge implementation activities. This can be linked to Osterloh and Frey (2000), arguing that a person may carry out a task without external motives, if they see the personal value in doing so. Thus, the intrinsic motivation of the team members allows knowledge implementation to take place as the team members see the value in engaging with their personal time. However, this has to be seen as critical, as the commitment of personal time should not be a standard of how to deal with one's workload.

Staffing

Staffing considerations can further affect time resources of project team members. The findings show that previous collaboration between project team manager and other members of the team facilitated discussions and collaboration, as the employees usually had the same or at least a similar pre-existing knowledge stock. Through these strategic staffing approaches, team members could allocate more time to knowledge implementation activities,

instead of aligning each others' knowledge stock and spending too much of their already limited time on getting to know each other, explaining strategies, etc. Mueller (2014) argues that hierarchical and bureaucratic structures in organisations limit knowledge flows because they require time-consuming processes. Applying these findings from an organisational perspective to a team perspective, can explain how the structures of a team, i.e. the staffing of it, can bear time challenges.

Proximity between Sender and Receiver

The proximity between sender and receiver also showed to have a positive impact on the time resources of the project team members. As the existing learning material in form of videos, presentations, or sharepoint-websites, among others, could get very exhaustive, personal support and guidance from the sending unit could substitute for the need to go through the learning material, which essentially saved a lot of time that could be dedicated to the actual implementation of that knowledge.

Theory suggests that leadership and supervision can increase knowledge implementation by taking an active role in pushing the receiving units in engaging in learning activities and implementing the knowledge. Thus, a more effective knowledge implementation is facilitated (Kulkarni, Ravindran & Freeze 2006). The findings in this study can contribute to this theory by showing how proximity between the sender and receiver decreases the time needed to learn and understand how to implement knowledge. Thus, it can be argued that the sending unit's engagement not only facilitates a more effective implementation phase, but it also affects the amount of time needed for it.

In addition, Pedersen, Petersen and Sharma (2003) argue that knowledge transfer mechanisms must suit the characteristics of the transferred knowledge. Otherwise it might bear unnecessary communication costs, when for example travelling or face-to-face meetings are held for the transfer of knowledge that could easily be codified in, for example, text. Based on the findings of this study, it can be argued that a mixture of transfer mechanisms, in this case standardised learning material in combination with face-to-face meetings, reduce the costs in the form of the resource time significantly for both sending and receiving units. Digital learning mechanisms, such as written documents or learning videos, facilitated transfer of knowledge about tools, frameworks, etc. However, the more tacit knowledge, including how to implement this knowledge required rather personal transfer mechanisms, confirming findings by Pedersen, Petersen and Sharma (2003). It further confirms Nonaka's

(1994) proposal that exchange of know-how, therefore tacit knowledge (Grant 1996a), requires socialisation between sender and receiver.

Collaboration among Project Teams

The empirical data also show that collaboration among project teams was sometimes perceived as negatively affecting knowledge implementation, as it cost valuable time with only limited output. The ratio of invested time to realised output was therefore perceived as negative, which takes away important shares of the time that is dedicated to the project team work. The theory argues that the characteristics of project teams, including their independence and flexible structure, does not provide a suitable setting for collaboration between project teams (Mueller 2014). In addition to the characteristics of project teams, time is emphasised as an important facilitator for knowledge-related activities among project teams. This can be strengthened in the literature, as it is emphasised that lack of time can negatively affect knowledge sharing among project teams (Mueller 2014). The findings in this study add an additional aspect to the literature by showing that lack of time can also negatively affect other knowledge-related activities, such as the implementation of knowledge in project teams.

5.1.2.3 Summary

To summarise, it appears to be challenging to affect the time barrier for knowledge implementation activities. Time challenges are discussed in existing team and knowledge literature, and also represent a major barrier in this study. The four indirect determinants intrinsic motivation, staffing, proximity between sender and receiver, and collaboration among project teams, show how the time constraint is affected in this study.

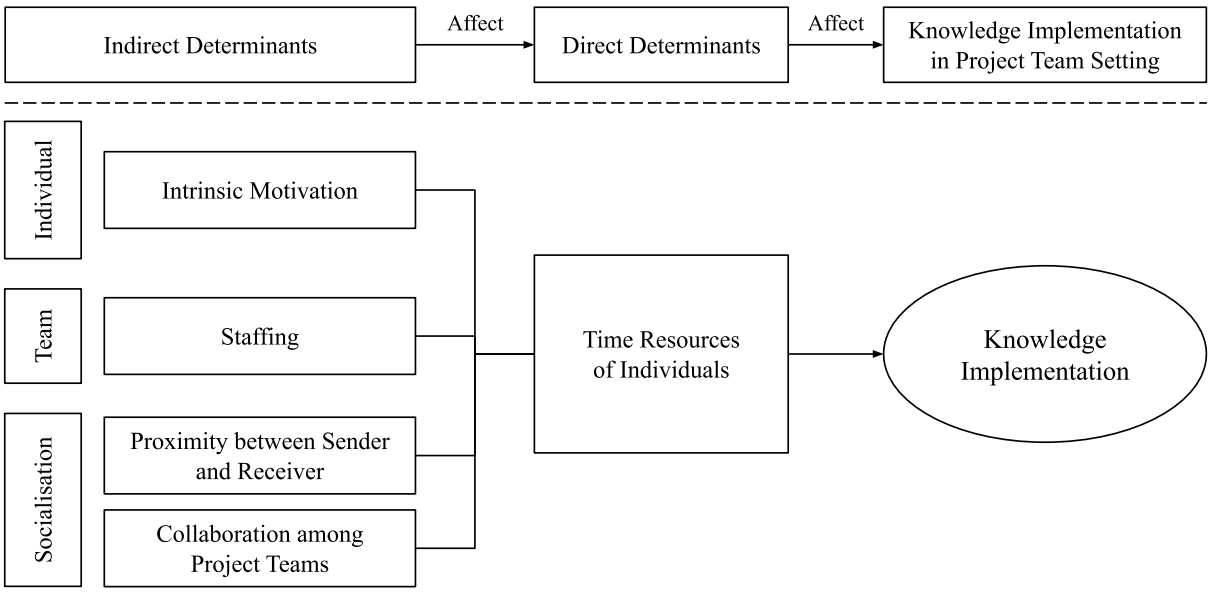

Figure 10: Time Resources of Individuals as a Determinant for Knowledge Implementation, compiled by authors

5.1.3 Prioritisation

5.1.3.1 Direct

The empirical findings emphasise that the project team setting creates prioritisation issues for the team members as the majority of them commit most of their time to their line organisation. For instance, a number of respondents expressed difficulties in incorporating their tasks of the project team into their schedules. Considering that the tasks in the project teams are in parallel to their engagement in their line departments, this setting creates difficulties in determining what should be prioritised and how to proceed. As a result, the prioritisation issues are emphasised to have a negative effect on the degree of engagement in the project teams. Included in the tasks of the project teams is the implementation of knowledge about strategy, tools, and framework. By having to prioritise other tasks, it can be argued that prioritisation plays a significant role in the degree of knowledge implementation in project teams.

Theory argues that knowledge processes, mostly connected to knowledge sharing, are usually seen as additional tasks in project teams (Mueller 2014). The findings extend current literature by also incorporating that not only sharing, but also the implementation of knowledge, is seen as an additional task in the project teams. The findings demonstrate that the limitations in knowledge implementation in the project teams can be connected to prioritisation issues.

5.1.3.2 Indirect

Extrinsic Motivation

Some respondents argued that a lack of promotion and career opportunities when participating in the project teams led to them putting less priority on their project team work, because they saw no incentive in participating. Hung, Durcikova, Lai & Lin (2011) propose that employees are limited in, among other factors, time and therefore reflect on if their contribution to knowledge-related activities is rewarded by extrinsic factors such as economic rewards. Applying this proposal in the underlying team context that is highly related to knowledge-related activities might explain why a lack of extrinsic motivation leads to lower priority of the project team tasks for some respondents. Since there is no career opportunity, contribution to the project team work is regarded as less attractive.

Managerial Support, *Staffing and Cross-Functionality*

The empirical findings show that prioritisation issues could be decreased by managerial support. The support from the project team manager helped the team to prioritise tasks in their different departments. This was especially emphasised in the project team where the team members have their project team manager as their line manager as well. From the manager's perspective, this unified oversight of the team members' tasks in their different departments, enables them to better support them in prioritising tasks. This ensures that each project team member's workload and working hours are effectively balanced. It was emphasised that the managerial support assisted the project team members to structure their tasks to become more efficient and complete more tasks in the project team successfully. This is in line with findings from Sarin and McDermott (2003), who argue that leaders who give the team members clear structure, also in form of objectives and goals, increase learning and knowledge implementation in teams. The findings further nuance this view by arguing that structure from leaders supports team members in prioritisation issues, which eventually affects knowledge implementation. Thus, it can be argued that this structure of the project team has an influence on prioritisation and therefore indirectly affects the knowledge implementation. The importance of managerial support can be strengthened by theory that argues for the importance of leadership in the context of knowledge processes and their contribution of focus and incentives to reach team objectives (Lowik, Kraaijenbrink & Groen 2016; Olivier & Kandadi 2006). This reinforces the importance of strong leadership in the successful execution of project teams, as it allows for effective delegation of tasks.

Further, the empirical data show that prioritisation issues were decreased if managerial support was accompanied by a successful staffing approach of the teams. The project teams that emphasised considerable benefits of managerial support, also showed to be staffed in a way that facilitated managerial support as the team members' manager acted as manager in their line organisation simultaneously. Thus, the findings demonstrate when team members have different managers in the team and line organisation, it can result in administrative challenges. This, in turn, raises the complexities faced by managers when it comes to prioritising their team members' tasks.

Proximity between Sender and Receiver

Additionally, the empirical findings suggest that there is a relationship between the proximity of sender and receiver and the prioritisation issues expressed by the receiving units. In particular, proximity was highlighted as having positive effects when the project team faced difficulties prioritising between their line department and the project team. This effect could be avoided with the presence of the sending unit. In such cases, the sending unit could provide the necessary guidance, ensuring that the project team was aligned with the sending unit's agenda. This can be strengthened by Kulkarni, Ravindran and Freeze (2006), who argue for the importance of support from the sending unit to what extent the receiving unit is implementing knowledge. The findings of this study build on this theory and propose that the sending unit is insofar important, as it can affect prioritisation dilemmas of the receivers.

In addition, the sending unit expressed the importance of having some kind of a framework between sender and receiver, that contributed with some structure in what extent the sending unit should influence the receiving unit's work. Figuring out to what extent the sending unit could engage with the project teams was emphasised as challenging. This was due to two causes; firstly, the project team was set to become increasingly autonomous as they became more mature. As a consequence, the sending unit was unsure how much structure they should provide to the receiving unit without affecting their autonomy. Thus, it can be argued that the sending unit can have influence on the prioritisation of the project team. However, the sending unit must limit their engagement to prevent negative effects on the project teams, such as delimiting their creativity. In conclusion, proximity between sender and receiver can have an influence on how the project teams structure their tasks and prioritise them accordingly, which affects the degree of how much team members could contribute to knowledge implementation activities. It is important that the sending unit takes active actions in pushing the project teams in prioritising their tasks in the project teams. This

should however be conducted with caution of not influencing the receiving unit too extensively. This can be strengthened by theory suggesting that project teams that remain in knowledge-intensive settings, prosper if they are given a high amount of autonomy and independence (Mueller 2014). The empirical findings further contribute to theory by illustrating the complexity of giving project teams the right amount of autonomy and independence regarding knowledge implementation activities.

5.1.3.3 Summary

As a result of the findings, Figure 11 shows that prioritisation affects knowledge implementation in a project team setting. Furthermore, it is demonstrated that prioritisation is further influenced by other determinants, including team and socialisation determinants, which therefore indirectly influence knowledge implementation.

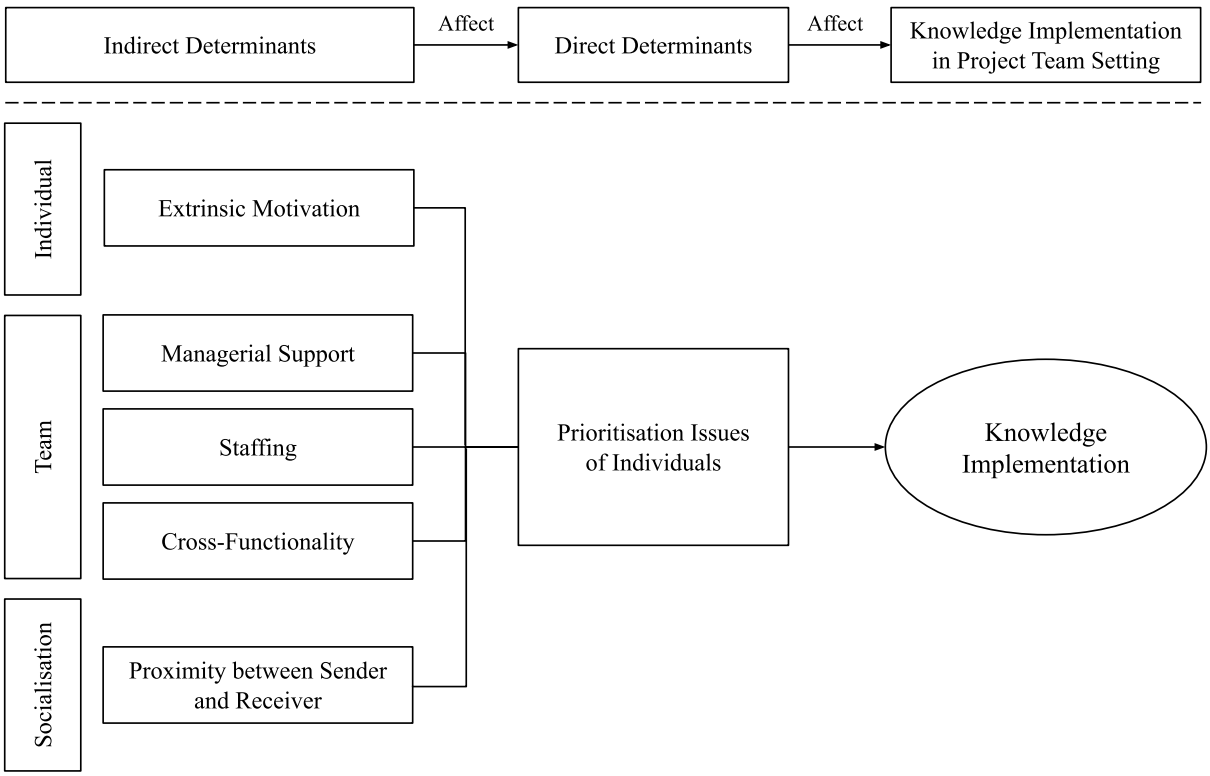

Figure 11: Prioritisation Issues of Individuals as a Determinant for Knowledge Implementation, compiled by authors

5.1.4 Alignment with Operations

5.1.4.1 Direct

The fit between the characteristics of knowledge and its practical implementation is argued by Argote, McEvily and Reagans (2003) to have an influence on performance outcomes. The empirical findings show that the alignment of the acquired knowledge with operations of the project team members affected the degree of knowledge implementation among them. For instance, the project teams expressed challenges in applying theory into practice, as they had troubles to concretise the theoretical aspects that they learned about into practical outcomes. As a result, the challenges for the project teams in implementing the knowledge into their operations was emphasised by several project team members to have an impact on the degree of the implementation. Szulanski (2000) labelled this challenge as overcoming the technological gap, caused by language difficulties, differing standards of different cultures, or varying coding schemes. Even though the sending and receiving unit in the case study had the same organisational context, the differences on a micro-level led to this technological gap. It is further argued in theory that the properties of knowledge can have a significant impact on the extent to which transferred knowledge will be acquired and applied in the receiving unit. Nonaka (1991) asserts that tacit knowledge, as opposed to explicit knowledge, is increasingly difficult to transfer. The findings of this study highlight the difficulties faced by project teams in implementing knowledge, primarily attributed to the complexity involved in translating theoretical concepts into practical application. Consequently, it can be argued that due to the tacitness of certain parts of the transferred knowledge, challenges in terms of its transferability and successful implementation were faced in the project teams. Furthermore, Szulanski (1996) argues that the use of knowledge is affected by the uncertainty of its characteristics, such as tacitness or difficulties of understanding its context. As a result, it is possible to emphasise that the ability to align the transferred knowledge with existing operations is a significant determinant of knowledge implementation.

The characteristics of the alignment with operations show to have similarities with the RACAP dimension that Zahra and George (2002) label *transformation* dimension, the second part of RACAP besides *exploitation*. *Transformation* is defined as the ability to connect the existing knowledge stock with the newly received knowledge. As the findings demonstrate that respondents have difficulties translating the new knowledge into their daily operations, therefore connecting new and old knowledge, it can be argued that *alignment with operations* is a similar concept to the *transformation* dimension. The authors characterise exploitation as "incorporating acquired and transformed knowledge" (Zahra & George 2002, p. 190), which

is interpreted in this study as that *transformation* is a preceding phase to *exploitation*. Beyond that, it is not explicitly explained how *transformation* and *exploitation* are linked to each other. Based on the findings of this study however, this thought can be developed by proposing that *transformation* has a direct effect on *exploitation*, as the findings show that alignment with operations affects knowledge implementation.

5.1.4.2 Indirect

Prior Experience

The theory argues that prior experience i.e. pre-existing skill set or knowledge stock, has an influential impact on the receiving unit's ability to absorb knowledge and implement it in their work (Minbaeva 2007; Argote, McEvily & Reagans 2003). As proposed by Zahra and George (2002) the absorptive capacity of the receiver is dependent on its ability to not only acquire new knowledge but also to apply the knowledge in the receiver's daily work. Gupta and Govindarajan (2000) further argue that prior related knowledge is important to increase the recipient's ACAP by increasing the ability to identify and implement relevant knowledge. The findings confirm this and show that prior experience was emphasised to have an indirect impact on the implementation of knowledge in the project teams. Prior experience is decreasing the perceived complexity of the transferred knowledge and facilitating its transformation into daily activities, because knowledge receivers with a higher expertise can fall back on previous experience compared to inexperienced knowledge receivers. By having prior knowledge about the topic, the project team members emphasised how this facilitated their understanding of how the knowledge should be implemented in the daily work, and therefore increase the knowledge's alignment with their operations. This is in line with Minbaeva (2007) who argues that the employee of an organisation must possess the right skills to acquire and apply the knowledge to meet the organisational objectives.

Perception of Learning Activities

In addition to prior experience, the empirical findings show that the learning activities offered to the project teams had an impact on translating the new knowledge into their daily operations. The learning activities therefore had an indirect effect on the knowledge implementation, because they were decisive for facilitating the alignment with operations. The empirical data show that there are both positive and negative aspects to account for related to the learning activities. On one hand, some of the respondents expressed that the variety of learning activities facilitated their understanding of the knowledge. On the other

hand, several respondents expressed the difficulties of the practical implementation of the knowledge, even though they understood the learning material. Thus, the learning activities showed to facilitate a better theoretical understanding of the tasks and objectives in the project teams, but they sometimes lacked the ability to facilitate practical implementation of the knowledge. As a result, knowledge implementation can be emphasised to be indirectly affected by the characteristics of the learning activities, because learning activities of high quality help receivers to understand how to connect it to existing operations, thus ensuring alignment with operations. Drawn from this analysis from the empirical data, it can be argued that the findings confirm existing literature about DCAP, that argues that DCAP comprises the ability to "efficiently, effectively and convincingly frame knowledge in a way that other people can understand accurately and put into practice" (Tang, Mu & MacLachlan 2010, p.1586).

Proximity between the Sender and Receiver and Feedback

Theory argues that there is a distinct connection between the sender and receiver relationship and knowledge implementation (Argote, McEvily, Reagans 2003; Gupta & Govindarajan 2000; Alavi & Leidner 2001). Based on the empirical findings, respondents in the receiving units have expressed the importance of close proximity to the sending units in understanding how to align received knowledge with their operations. Furthermore, the interpersonal relationship between the sender and receiver was emphasised as facilitating better integration of knowledge in the daily activities and better collaboration between the sender and receiver. This was enabled by weekly meetings that allowed for discussions regarding the implementation of the knowledge into the operations. Szulanski (1996) argues that knowledge transfer requires personal communication, particular when parts of the transferred knowledge have tacit components. The "intimacy of the overall relationship between the source unit and the recipient unit" (Szulanski 1996, p. 32) is influencing the success rate of this knowledge transfer from person to person. This study nuances Szulanski's (1996) findings by arguing that it is also applicable to the knowledge implementation process, a differentiation that Szulanski (1996) does not account for. Proximate relations between knowledge sender and receiver have been argued also by other scholars to serve as an enabler of knowledge sharing and learning in organisations (Argote, McEvily and Reagans 2003). This study further extends these insights by arguing that for knowledge implementation, proximity between sender and receiver affects the individual's ability to align the transferred knowledge with their daily operations.

Related to the proximity between sender and receiver, feedback from the knowledge receiver to the knowledge sender was identified to impact the alignment with operations. Giving feedback on, for example, how certain tools did not work, started an implementation process of that feedback into the knowledge and changed it, so that the implementation of the altered and aligned knowledge was facilitated. By doing this, the teams were overcoming the technological gap, because they aligned their coding schemes and language (Szulanski 2000).

Proximity among Team Members and between Project Teams

In addition to the importance of proximity between the sending and receiving units, the empirical data indicate that the proximity within the project team played a significant role in aligning the transferred knowledge with their operations.. This was expressed by the project team members as they saw interaction within the team and support from their manager as important facilitators in how they implemented the knowledge. Furthermore, the proximity in the project team increased the interpersonal relationships between the team members and an environment was established where the project team members had the confidence and trust in their team members to ask for clarification or help in interpreting and implementing the knowledge. Hence, team proximity played an important role for the individual team members in increasing and understanding the alignment with their operations.

Furthermore, several of the respondents argued for the important role that interaction and collaboration between the different project teams played. The collaboration was emphasised as important due to the fact that the project teams were all considered as 'receivers' of the knowledge. By interaction and collaboration, the project teams could share their challenges in implementing the knowledge. Thus, collaboration between project teams was an important activity that increased the receiving unit's ability to implement the knowledge by understanding how to translate the new knowledge into their daily operations. The theory argues that team activities, including workshops and other social events, have an influential role in facilitating the outcome of knowledge-related activities. Mueller (2014) emphasises how such social interactions affect interactions among project teams. The findings in this study build upon that argumentation, by emphasising that interactions, both within and between project teams can facilitate implementation of knowledge.

The findings further showed evidence on physical distance as challenging for some respondents. On some occasions, remote work seemed to hamper knowledge implementation, because it was more difficult for employees to clarify questions about alignment with operations, as spontaneous and immediate discussions between employees that are physically

apart from each other were aggravated. Even though KM was facilitated through various systems, including email, chat channels, video conference tools, sharepoint websites, internal learning websites, centrally saved presentations, etc., it was still challenging for some respondents to overcome the liability of geographical distance. Edmonson and Nembhard (2009) identified geographically dispersed teams as a challenge to team effectiveness, as "collaborative inquiry" (Edmondson & Nembhard 2009) on-site facilitated problem-solving. The findings of this study extend this theoretical approach by applying the knowledge-lens to it. In line with Edmondson & Nembhard (2009), this theory can therefore be developed by proposing that geographically dispersed teams might face knowledge implementation challenges, because less collaborative inquiry about how to translate the acquired knowledge into daily operations takes place. Jasimuddin (2007) further emphasised the challenge that comes with geographical distance between sender and receiver, as face-to-face interaction allows for natural exchange of knowledge and ideas and it fosters natural conversations to start. Alavi and Tiwana (2002) propose that KM Systems, being IT infrastructure for KM activities, enhances knowledge implementation in virtual teams. Some 20 years later, with an exponential development of IT infrastructure and hence the researchers' perception that the KM Systems in the case company are highly advanced, this study therefore contradicts the proposal by Alavi and Tiwana (2002), as it was found that the mere existence of rich KM Systems (e.g. the learning platforms that exist in the case setting) does not guarantee success. This has, however, been perceived entirely differently among the respondents, mainly due to prior experience as this study shows.

Cross-Functionality

Building on Alavi and Leidner (2001), who state that too homogeneous team compilations limit knowledge creation processes, it was found that project teams with members from different departments also could enhance knowledge implementation processes. This cross-functional compilation was emphasised to enable the teams to contribute with different perspectives, which helps them in realising the alignment with operations of the knowledge. Apart from contributing to better understanding of how to use the strategic models and tools, the cross-functionality also contributed to better discussions in the team to facilitate better processes and provide new perspectives by discussing adjustments of certain parts of the knowledge or particular challenges they face when implementing it into their processes and operations. Thus, cross-functionality of project teams can be argued to improve teams' ability

to implement knowledge as it facilitates a better understanding and alignment with operations.

Staffing and Managerial Support

Having the same team and line organisation manager facilitated discussions about how to align the learning with the respondents' respective operations and tasks, because managers and team members possessed a similar knowledge stock, as they were all working in the same field. The teams could therefore overcome the technological gap (Szulanski 2000) more easily, because they shared the same language and coding schemes when discussing what they were learning.

Similarly, the expertise and support by the team leaders could facilitate the translation of the transferred knowledge into the respondents' operations and routines. Sarin and McDermott (2003) analysed these team leader characteristics on learning processes and knowledge application and found no relation between managers that set structures on how to apply knowledge with an increased success of knowledge application in teams. The findings of this study contradict this finding and argue that when team leaders demonstrate how to align transferred knowledge with daily operations, and by this giving the knowledge implementation process a structure, it positively affects the knowledge implementation process.

5.1.4.3 Summary

As a result of the above analysis, Figure 12 shows that alignment with operations directly affected the degree of knowledge implementation in a project team setting. Furthermore, it is demonstrated that alignment with operations itself is influenced by several indirect determinants, including individual, team and socialisation determinants. Therefore, it can be argued that the determinants in the left column of the below figure indirectly affect knowledge implementation.

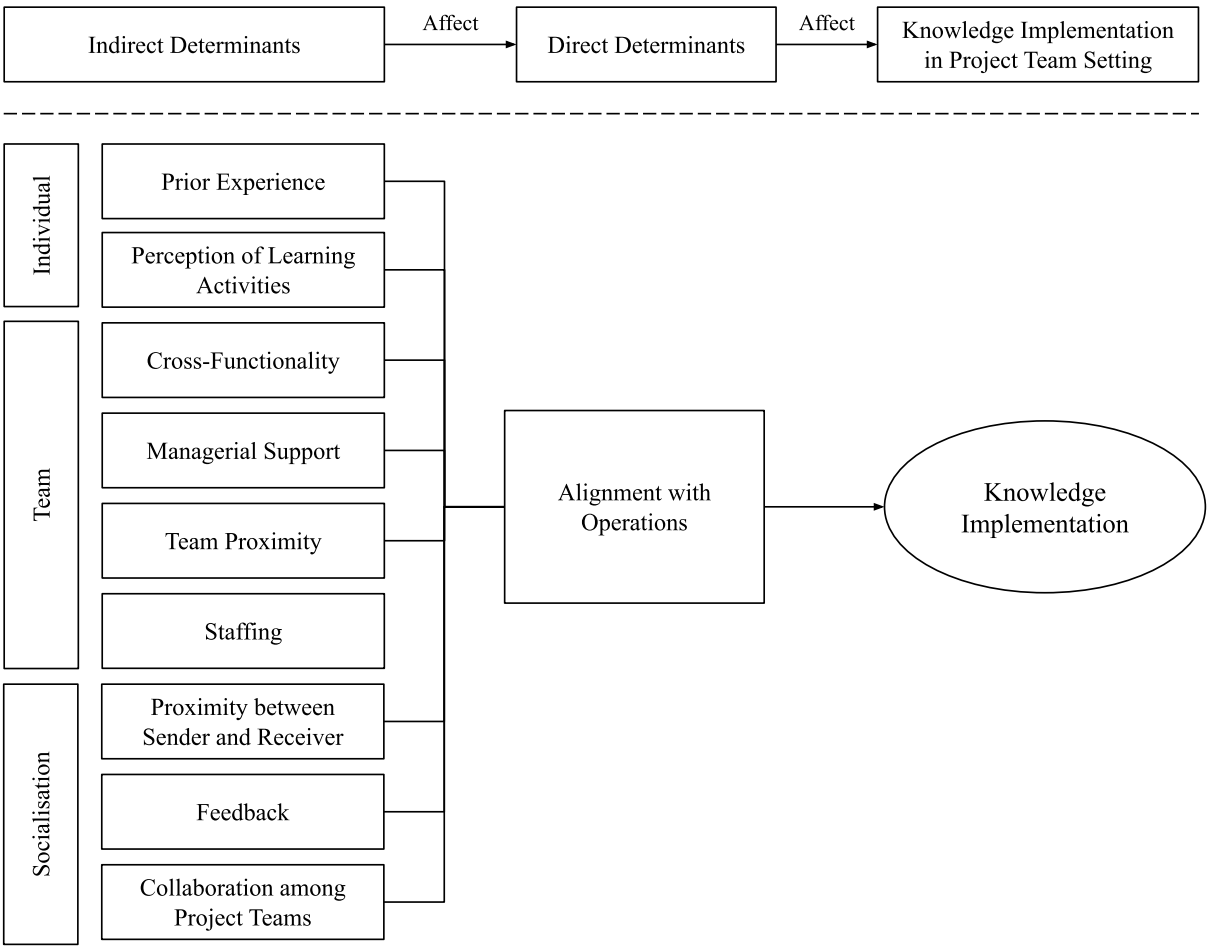

Figure 12: Alignment with Operations as a Determinant for Knowledge Implementation, compiled by authors

5.2 Interpretation of the Analysis

Mueller (2014) argues that one of the reasons for the surprisingly little amount of research on how successful knowledge sharing between teams is affected, is the assumption of researchers and scholars that individuals act on behalf of their organisation, and it would be therefore paradox that research on individual knowledge sharing determinants is not sufficient to understand the determinants of knowledge sharing on a team-level. As organisational learning theory suggests, the concept of OL cannot be explained by just summarising all individual actions and competences, much rather it is necessary to take into account the reciprocity of individual learning activities and experiences, and also the organisational context in which OL takes place (Mueller 2014). Knowledge sharing between project teams is therefore regarded "as an activity that project team members conduct and that influences the group, while being influenced by the group" (Mueller 2014, p. 191). The

underlying analysis on how project team settings affect knowledge implementation builds on this argumentation and confirms these findings and assumptions. Even though knowledge implementation is evident through the change of organisational routines and processes (Zahra & George 2002), the action of implementing is eventually conducted by individuals. It is therefore relatable that many studies focus on knowledge management topics on an individual level (Nonaka 1991; Tang 2011; Mariano & Walter 2015).

The four direct determinants that affect knowledge implementation and were identified in this study, are all originating and residing in the individual employee. Alignment with operations, or the ability of translating somewhat theoretical learnings into practical use, as well as intrinsic motivation, time, and prioritisation are determining the degree of knowledge implementation on an individual level. However, as the findings confirm, the degree and the ability of implementing knowledge into one's individual routines and processes is strongly influenced by the project team setting through team and socialisation determinants. The findings demonstrate how direct knowledge implementation determinants are in themselves affected by individual, team, and socialisation determinants. Minbaeva et al. (2003) demonstrated a similar approach to explain how ACAP affects knowledge transfer. While ACAP has a direct effect on knowledge transfer, ACAP in itself is determined by other factors that therefore have an indirect effect on knowledge transfer. Opposing the approach by Gupta and Govindarajan (2000), who chose to study knowledge flows within MNCs on a nodal level, meaning that the authors focused on the behaviour of an individual unit, the findings of this study propose that a combined approach of studying the phenomena of knowledge management in MNCs on a nodal and dyadic level can lead to deeper understanding of underlying knowledge implementation success determinants. Nodal and dyadic level hereby combines the approach of (1) studying units on an individual level and (2) studying the joint behaviour of unit pairs. To understand the interrelation between individual, team, and socialisation determinants in the study, this nodal-dyadic approach is critical.

5.3 Revision of the Conceptual Model

The analysis of the empirical findings shows that some alterations and alignments to the initial conceptual model from chapter 2.8 are to be conducted. It has been demonstrated that individual, team, and socialisation determinants are important factors that affect knowledge in different ways. Still, solely observing these three groups of determinants and relating them

separately to knowledge implementation success does not guarantee holistic, valuable insights into the complex and rich concept of KM. It is further of utmost importance to emphasise the relationship between the determinants, as well as how they are linked to knowledge implementation. This differentiation between direct and indirect links is a conceptualisation that was not accounted for after reviewing existing literature from the knowledge field. Thus, a revised conceptual model is presented below in Figure 13, taking into account findings from both the theoretical framework as well as the empirical findings and analysis of these.

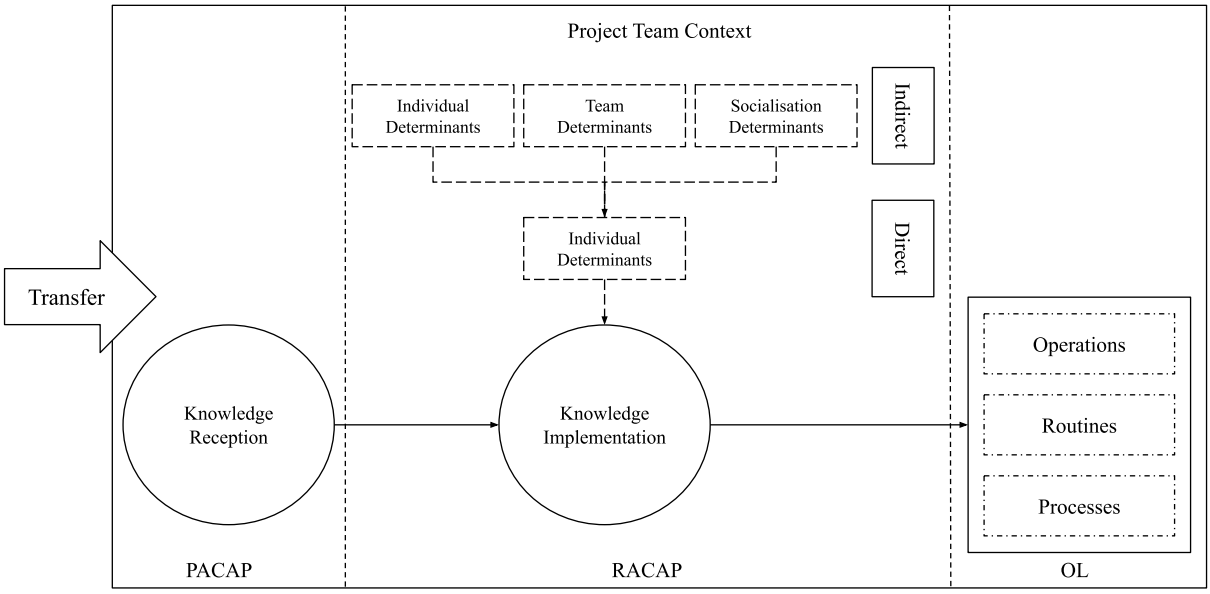

Figure 13: Revised Conceptual Model, compiled by authors

The revised conceptual model differs from the model based on the theoretical framework insofar that it accounts for the important dimension of indirect and direct determinants of knowledge implementation. For visualisation purposes, the determinants are not named in the conceptual model. They are presented in Figure 8 in chapter 5.1 and in the respective subchapters 5.1.1 - 5.1.4 which are each summarised with a respective figure. The revised conceptual model incorporates insights from the literature review of existing theory, and at the same time reflects the reality of the underlying case study.

6 Conclusion

6.1 Main Findings

This case study has examined how project teams affect knowledge implementation in an MNC with the purpose to contribute to existing literature on knowledge management and project teams and fill an existing research gap of investigating knowledge implementation on a project team-level. For this purpose, the authors have developed a conceptual model that is based on a literature review of project teams in organisations, knowledge implementation and related concepts, such as knowledge management, absorptive capacity, and applied a project team-level lens to it. To apply this conceptual model in a practical setting, the authors conducted semi-structured interviews with various members of different project teams of a Swedish MNC that gave new insights into how project team characteristics affect knowledge implementation in these teams. The gathered data was codified into several themes, based on the conceptual model, and sorted into three main categories: individual, team, and socialisation. In order to answer how project teams affect knowledge implementation, determinants were analysed and a distinction was made between four determinants that directly affected knowledge implementation, and eleven determinants that indirectly affected knowledge implementation, as they rather affected the four direct determinants.

"How are project teams affecting knowledge implementation in an MNC?"

The results of the study show that project teams affect knowledge implementation in an MNC through an interplay of different determinants that are based on an individual, team, and socialisation level. The analysis shows that only individual determinants, being intrinsic motivation of individuals, time, prioritisation, and the individual ability to align new knowledge with existing operations, have a direct effect on knowledge implementation. These findings show to be in line with existing literature on knowledge management. However, the analysis further shows that other determinants related to the project team setting, mainly on an intra-team and inter-team level in the form of team and socialisation determinants, but also further individual determinants, have a significant influence on these four direct determinants. The findings show that indirect determinants such as proximity between sender and receiver or cross-functional compilation of project teams have critical implications on above mentioned direct determinants which in their turn directly affect knowledge implementation, for instance intrinsic motivation or prioritisation. It is therefore

necessary to apply a holistic approach to studies of knowledge implementation, as a fragmented analysis of individuals does not account for the richness of the knowledge management concept.

6.2 Theoretical Contributions

The purpose of this thesis was to contribute to existing literature on the broad concept of knowledge management and fill the existing literature gaps regarding knowledge implementation and project teams. The findings of this study yielded several significant theoretical contributions. These contributions provide valuable insights into the relationship between project teams and the successful implementation of knowledge within organisations.

By synthesising existing literature on project teams and knowledge implementation, this study enriched the conceptualisation of this theoretical field. The analysis has identified key determinants that influence the effectiveness of project teams in facilitating knowledge implementation and how they relate to each other. The authors further proposed a refined conceptual model that encompasses the complex interplay between individual, team, and socialisation determinants and how knowledge implementation in project teams connect to related concepts, such as knowledge transfer and absorptive capacity, that can be applied and tested in future research.

Through the empirical research, the authors identified and emphasised several critical success factors that underpin effective knowledge implementation within project teams. The findings highlight the importance of team composition, leadership styles, collaboration, and individual characteristics in supporting knowledge implementation efforts. These determinants contribute to a more comprehensive understanding of how project teams can optimise their performance and enhance knowledge implementation.

The analysis further demonstrated the significance of approaching knowledge implementation studies in a combined approach of individual- and team-level, instead of investigating these dimensions in isolation. Even though the findings partially correlate with existing literature and demonstrate that knowledge resides in individuals and therefore knowledge implementation is an activity that takes place on an individual level, it is critical to take into account the effects that a project team setting has on individual knowledge implementation activities. As there exist many studies that do not clearly differentiate between the different knowledge management activities, e.g. dissemination, assimilation, or

implementation (Mills & Smith 2011), it can be argued that the findings can potentially be significant for studies regarding other knowledge management activities as well.

This study further sheds light into the concept of ACAP and its two blocks, PACAP and RACAP (Zahra & George 2002). The findings demonstrate the relationship between knowledge management and ACAP and provide a detailed view on RACAP. Based on the analysis, this study shows how *transformation*, in the form of the ability to align knowledge with operations and tasks, is affecting *exploitation*, providing a foundation for further research in this field.

Lastly, this study argues for a combined approach of nodal and dyadic analysis in knowledge implementation studies (Gupta & Govindarajan 2000), as the findings reveal that the interrelation between studying units on an individual level (nodal) and studying the joint behaviour of unit pairs (dyadic) yields new findings and connections that have so far been overlooked. To understand the interrelation between individual, team, and socialisation determinants in the underlying study, this nodal-dyadic approach is critical.

6.3 Managerial Implications

The findings in this study can be transferred into a number of managerial implications. It further emphasises that the setting of project teams can bring both opportunities and challenges for organisations. These findings can contribute to increased managerial understanding on the topic of knowledge implementation and how it is affected in the setting of project teams.

A key finding of this study is the challenge that project teams face by their members only being engaged in the project team part time. This structure is contributing with constraints in time and prioritisation among the team members. As a result, the empirical findings and analysis show that knowledge implementation in the project teams is limited due to challenges in allocating the amount of time needed to fulfil the tasks accordingly in the project teams and challenges in prioritisation between tasks in the project team and line organisation. The analysis shows potential opportunities to overcome these liabilities.

Another finding encapsules how the project teams are staffed. The findings of this study emphasise that committed approaches to staffing of project teams can increase their ability to implement knowledge. The findings imply that cross-functionality, managerial support and team proximity improve this ability in the teams. It is therefore recommended for

managers and organisations with similar project team settings, to reflect upon staffing decisions in the light of their effect on knowledge implementation.

In addition, proximity has been emphasised in the empirical findings as a facilitator for knowledge implementation. This includes both the proximity between sender and receiver and proximity on a team level. For managers and practitioners it is therefore recommended to evaluate the relationships between the organisational units and promote proximity between them to increase organisational performance through knowledge implementation.

The analysis further shows that organisations face dilemmas when aiming to affect the knowledge implementation success through project team settings. It becomes, for example, evident when observing a cross-functional compilation of project teams. This cross-functionality, on the one hand, facilitates the individual's ability to align acquired knowledge with their individual operations and processes, but on the other hand can bear time constraints that might limit knowledge implementation activities. It is therefore important for managers to evaluate respective settings of project teams carefully, as they need to account for these dilemmas.

In a concluding manner, managers need to be aware that knowledge implementation is an activity that is conducted by the individual employee. It is therefore necessary to acknowledge and consider each individual's abilities and strengths to maximise the value of knowledge management.

6.4 Limitations and Future Research

This study investigated how project teams affect knowledge implementation by conducting a case study within a multinational corporation, gathering data mainly through semi-structured interviews. While the research aimed to provide valuable insights, it is important to acknowledge certain limitations that may have influenced the research process and the interpretation of findings. These limitations should be considered when interpreting the results. Firstly, the generalisability of the findings may be limited due to the study's focus on a single case within one MNC. The unique context, organisational culture, and specific characteristics of the selected company may restrict the applicability of the results to other organisations or industries. Secondly, the sample size of twelve respondents from four different teams within the MNC may impact the representativeness of the entire organisation. While efforts were made to select participants from diverse roles and responsibilities, the limited number of individuals involved may affect the breadth and depth of the data

collected. Consequently, the insights obtained may not fully capture the perspectives and experiences of all relevant stakeholders. Furthermore, the selection of teams within the MNC was limited due to availability and willingness to participate, which may introduce a selection bias. The chosen project teams may not be fully representative of the entire organisation, potentially impacting the generalisability of the findings. It is important to acknowledge that including a broader range of teams could have yielded different perspectives and outcomes. Thirdly, this study focuses on the effects of project teams on knowledge implementation. The effects of the analysed determinants on related concepts, such as the knowledge reception, have not been accounted for and might be subject for future research.

Future research can further investigate if the findings of this study can be generalised quantitatively. By applying the presented revised conceptual framework in other contexts and testing for statistical significance, the transferability of this study could be increased and demonstrated. Furthermore, it is interesting to investigate different settings of project teams. For example, as the members of the project teams in the underlying study generally demonstrated high previous knowledge in data, future research can focus on project teams that are facing entirely new knowledge fields. Additionally, future research might incorporate mixed-methods approaches, combining qualitative and quantitative research methods, as these can offer a more comprehensive understanding of knowledge implementation in teams. Combining in-depth interviews or case studies with surveys or quantitative analyses can provide a broader perspective and triangulation of findings, enhancing the validity and reliability of the research.

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Appendix

Appendix 1 - Interview Guide

1. **Introduction of Respondent**

- What is your line organisation and what tasks does your role imply?
- What is your previous work experience?
- How long have you been part of the project team?

2. **Individual Determinants**

- How do you perceive the data strategy and the role of the framework and tools for the company?
- How does this align with your strategy?
- How does this alignment/non-alignment affect your usage of what you have learned?
- How do you receive the knowledge in the project team / how are you learning?
- How do you evaluate the teaching activities?
- How do you perceive the amount of time that you are supposed to contribute to the project teams? Do you think more/less is necessary to make sure that you can utilise the learnings?
- Does this time challenge lead to prioritisation challenges between your line organisation and project team work?

3. **Team Determinants**

- (For team members) How would you evaluate the support of your team manager when you implement the strategy and tools and know-how in your operations? Do you perceive it as supportive, is it necessary? How is your team manager supporting you during these processes?
- (For team managers) How do you make sure that the team members actually use what they are being taught? Do you think your support is necessary? If so, how?
- How do you perceive the initiatives within your project team to discuss the learnings and challenges? How does it help you?

4. **Socialisation Determinants**

- Can you describe the initiatives of collaboration or interaction that typically take place between [the sending unit] and your team?
- How do you think these initiatives help you in implementing what they are teaching you in your daily operations?
- Are there any possibilities to give feedback? How do you evaluate these possibilities? Does this have any impact on how engaged you are in the project team?