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Same Company, Different Realities: Understanding Enablers and Barriers to Knowledge Transfer

A Comparative Analysis of Two Research Divisions

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Abstract

This study explores the complexities of knowledge transfer, aiming to identify how existing enablers and barriers influence the knowledge transfer process within two research divisions of a multinational automotive manufacturing firm. Through a qualitative, comparative case study approach, the research reveals how divisional context, specifically structural and cultural factors, profoundly shapes the dynamics of knowledge exchange. Division A, characterized by a collaborative and open culture, facilitates informal and spontaneous knowledge transfers. In contrast, Division B operates through more formalized and structured transfer mechanisms due to its larger and siloed environment. The research highlights that traditional views of barriers as purely negative are overly simplistic; in practice, some barriers serve constructive roles, such as preventing information overload and enhancing communication quality. Furthermore, the interplay between enablers and barriers is shown to be dynamic and situational, suggesting that strategic adaptability is essential. Managerial implications point to the need for tailored, context-aware strategies that leverage both enablers and select barriers. Leadership and organizational culture should be cultivated to promote adaptive and resilient knowledge transfer practices. Limitations of the research include the single-case design and challenges associated with capturing tacit knowledge. Future research should consider longitudinal studies, cross-company comparisons, and more immersive methods such as workshops or observational studies to further uncover the evolving nature of knowledge transfer.

Keywords: *Knowledge transfer*, *Enablers to Knowledge Transfer*, *Barriers to Knowledge Transfer*, *Organizational Knowledge, Knowledge Sharing*

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1. Introduction

Many scholars argue that how an organization utilizes and combines its resources will substantially impact its competitiveness and potential for survival. Resources do not, on their own, create value; it is first when resources interact with others that value can be attained, all per the resource-based view (Grant, 1996). As globalization accelerates and competition intensifies, effective resource management becomes crucial for an organization's survival (Zaim et al., 2019). Tangible resources are often easy for competitors to replicate, while intangible resources are difficult to copy, thus offering the potential to provide greater value to the firm. Organizational knowledge, an intangible resource, is a fundamental resource that has gained substantial acknowledgment in recent academic literature. Whether in global corporations or smaller, fast-growing start-ups, knowledge is regarded as one of the most essential resources for an organization to succeed in today's competitive, knowledge-driven landscape (Azeem et al., 2021).

While companies are increasingly aware of the impact of knowledge as a strategic resource, effectively transferring and leveraging that knowledge within the firm remains a persistent challenge (López-Sáez et al., 2021). According to the authors, the true potential for competitive advantage lies not only in the possession of knowledge itself but in the effective transfer and integration within the organization. Several scholars further emphasize the critical aspect of knowledge transfer for organizations (Garavelli et al. 2002; Karlsen and Gottschalk 2004; Othman et al. 2014). To further enhance the often-overlooked power of knowledge transfer within organizations, Lew Platt, the former CEO of Hewlett-Packard, argued that "if HP knew what HP knows, we would be three times as productive" (Davenport and Prusak, 1998).

Much of the existing literature on knowledge management and knowledge transfer treats organizations as relatively uniform entities, often overlooking the internal diversity existing across divisions, functions, and technological domains. Yet, this internal heterogeneity can have profound implications for how knowledge is shared. That said, this study explores the complexities of knowledge transfer within a large automotive manufacturing firm. The organization has a fully developed research department consisting of several different divisions, where the study will compare two distinct research divisions, focusing on the potential differences and similarities of barriers and enablers to knowledge transfer. The comparison allows for an exploration of not only which mechanisms support or hinder knowledge transfer but also how those mechanisms may need to be adapted. Identifying divergences and commonalities is critical for organizations seeking to design flexible, suitable knowledge strategies that align with the diverse needs of internal divisions.

1.1 Background

The automotive sector is undergoing a significant transformation, some might even call it a crisis, due to the accelerating shift toward electric vehicles, self-driving vehicles, and surrounding geopolitical factors. Shifting political preferences and changing consumer behavior drive a growing demand for sustainable solutions, forcing manufacturers to adapt rapidly to maintain their market share. This has caused the market's emphasis to go from hardware-based solutions to a greater reliance on software innovation (AMS, 2023). The changes are estimated to require increased capital expenditures in new technology and the construction of resilient supply chains. Conversely, the expenditures in innovation emphasize the treatment of an organization's existing knowledge as a foundation from which to leverage. If knowledge within an organization is retained and transferred, the organization can act more agilely and adaptively.

Despite its recognition, knowledge transfer does not happen automatically. It is a complex process that requires substantial effort to yield noticeable results. A study of knowledge transfer in a manufacturing firm found that approximately one-third of the attempts to transfer knowledge failed and were discontinued (Argote, 2024), highlighting the need to understand the practices or processes that facilitate knowledge transfer.

Meanwhile, competition is increasing in several directions, particularly from low-cost manufacturers. China's vehicle exports increased five times in 2024 compared to 2020, while exports from the United States and Japan fell, suggesting a shift in customer preferences (McKinsey, 2025). Geopolitical factors, such as the United States' initiative to impose significant tariffs on the EU, China, and several other countries, further challenge the industry's stability. Additionally, trade barriers risk causing difficulties in accessing critical materials (McKinsey, 2025), entailing further challenges or expensive detours for the manufacturers.

1.2 Problem Description and Research Question

Amid the current environment, organizations must thus not only understand the knowledge they possess but also identify knowledge gaps that need to be addressed through knowledge transfer, ensuring they remain competitive and agile in a rapidly changing market. Szulanski (1996) argues that firms experience greater adaptivity, productivity, and competitiveness if they engage in successful knowledge transfer practices. This, therefore, becomes particularly relevant in the automotive industry, where innovation demands are increasing and companies must integrate new technologies and practices. A failure to transfer critical knowledge could lead to research inefficiencies, missed opportunities, and falling behind competitors in an already challenging industry environment.

To navigate these challenges, it is no longer sufficient to examine knowledge transfer in generalized terms. Organizations must also consider the internal complexity of their

knowledge ecosystems. This includes recognizing that internal divisions may often differ significantly. The two research divisions selected reflect such differences, offering a valuable opportunity for analysis. One research division holds a nearly century-long track record of successful research with deeply established expertise. The other has gone through major changes following a shift in strategic focus and is directly involved in navigating the ongoing transformation within the industry. They differ fundamentally in their engineering nature and organizational priorities. One division is inherently technical and revolves around a technical domain that requires deep expertise and where problem-solving is often quantitative, with related measurable outputs. This aligns closely with the mold of a classic engineering role, where progress is measured through performance optimization and technical precision. Meanwhile, the other division is centered around a certain characteristic or attribute, not a stand-alone technology. It deals with human-centric considerations such as user experience and behavior, which are not entirely defined by hardware systems. Nevertheless, both divisions play a strategically important role in the organization's future.

This study explores how knowledge transfer practices unfold within two distinct research divisions. Central to this exploration is identifying how existing enablers and barriers influence knowledge transfer. These mechanisms are examined not only in general terms but specifically from the perspectives of both the sender and receiver of knowledge, acknowledging that certain enablers or barriers may primarily affect one party, while others influence both sides of the exchange. The study thereby seeks to understand how these dynamics operate within each divisional context and how their characteristics may vary. To guide our exploration, the study adopts the following research question:

How do existing enablers and barriers influence knowledge transfer practices across two research divisions at an automotive manufacturing firm?

To analyze how enablers and barriers influence knowledge transfer, it is essential to identify and understand the specific enablers and barriers that exist within the two current research divisions. Gaining this foundational insight provides the necessary context for evaluating their influence on knowledge transfer practices. Therefore, this step is intentionally integrated into the scope of the research.

A greater understanding of the subject area will provide valuable insights into certain practices that enhance knowledge transfer in the organization, particularly the research divisions studied.

1.3 Delimitations

This study centers on knowledge transfer with an in-depth examination of how enablers and barriers influence the transfer process. However, evaluating direct performance outcomes, such as innovation success or productivity gains resulting from knowledge transfer, falls beyond the scope of this research. Moreover, the scope is deliberately limited to internal knowledge flows within the organization, specifically within the two selected research divisions. Therefore, interactions and knowledge transfer efforts with external partners, suppliers, or customers are excluded, albeit such actors may also play significant roles in a broader knowledge transfer ecosystem.

While tacit knowledge is not entirely excluded from this study, its existence presents challenges, particularly in clearly identifying it and accurately measuring its transfer. Given that tacit knowledge is deeply personal, context-specific, and often difficult to articulate, this research acknowledges that some subtle and complex aspects of tacit knowledge transfer may not be fully captured. Consequently, the findings may under represent some nuanced knowledge exchanges, as well as some enablers and barriers to knowledge transfer. This represents a conscious delimitation, intended to maintain a clear focus and ensure feasibility within the scope and constraints of the study.

1.4 Outline of this paper

The remainder of this study is structured as follows: Section two provides the literature review and theoretical framework. Section three presents the methodology behind our work, including research strategy, research design, and data collection. Section four displays the results of held interviews, followed by section five, which discusses these findings with relevant literature. Finally, section six offers concluding remarks, contributions, and suggestions for future research.

2. Literature Review

Knowledge management is a relatively new subject in academia, emerging in the 1970s. Despite its comparatively short history, its significance has grown rapidly. At the heart of knowledge management lies the complex nature of knowledge itself, which is conceptualized from two dominant perspectives. One views knowledge as a distinct entity, either tacit or explicit, while the other sees it as existing along a continuum, with degrees of tacitness and explicitness varying based on an individual's access and capability to articulate or interpret it. Moreover, beyond this complexity, a knowledge transfer between a sender and a receiver will be supported or constrained by numerous factors, allowing for a broad discussion on how key enablers and barriers to knowledge influence knowledge transfer practices. This literature review begins by examining the concept of knowledge itself. It then turns to the intricacies of knowledge transfer, a process shaped by a range of enabling and inhibiting factors.

2.1 Knowledge

In traditional organizational theory, the resource-based view attempts to explain why firms can sustain a competitive advantage over time and earn superior returns. This perspective is based on possessing unique idiosyncratic bundles of resources and capabilities that competitors can not imitate. As an extension of the resource-based view, the knowledge-based view promotes knowledge as a firm’s most strategically important asset, arguing that an organization’s ability to create, integrate, and apply knowledge is its key source of competitive advantage (Grant 1996). Spender (1996) reasons that because the origin of tangible resources comes from outside the firm, the competitive advantage must, therefore, come from within and arise from the intangible firm-specific knowledge. The private good of knowledge adds value to the incoming factors and creates uniqueness to the output of the possessing organization. In simpler terms, knowledge is, in its passive form, useless until it is used or shared; only then can it lead to an outstanding performance (Abbakar et al., 2019).

While we live in an information-intensive society, it is essential to emphasize the distinction between information and knowledge. The former constitutes a flow of messages, the latter is created based on the action and beliefs of its holder. Information could be seen as a public good where the use does not deprive others of access. However, the interconnection between context and he or she who holds information makes knowledge scarce and private (Spender, 1996).

Since knowledge is embedded in all aspects of an organization's operations, managing this scarce and valuable resource becomes critical to effectively navigate the competitive environment (Bollinger & Smith, 2001; Spender, 1996; Grant, 1996). Conversely, knowledge management constitutes a critical cornerstone in an organization’s practices as it implicitly determines its competitiveness. Azeem et al. (2021) confirm this, emphasizing the need for knowledge retention and sharing to manage knowledge properly and overcome difficulties.

The practice of knowledge management essentially resides in capturing an organization's know-how and know-what through the creation and transfer of knowledge, thus constituting a crucial component to understand and harvest the organization's strengths and resources (Nonaka et al., 1996; Spender, 1996; Bollinger & Smith, 2001; Argote, 2024). Knowledge transfer, or the absence of it, can significantly influence an organization's efficiency, innovation, market competitiveness, and even its long-term survival (Muhammed & Zaim, 2020). Moreover, effective management will decrease the inherent competitive stress as it enables an organization to generate more with fewer resources by reducing costs and increasing the speed of operations (Bollinger & Smith, 2001). Understanding how an organization retains and disseminates knowledge within its workforce thus becomes essential for creating and sustaining a competitive advantage.

When knowledge is created, its transferability holds a crucial role. Without the ability to transfer knowledge, its value decreases within the organizational context as the constrained sharing hampers replication and broader application. Concerning transferability, the literature makes an epistemological distinction between knowing how and knowing about, where the difference resides in the ease of sharing knowledge between individuals or within a group. Knowing how, or tacit knowledge, is revealed through action, while knowing about, or explicit knowledge, is transferred through communication. Therefore, transferability depends on the tacitness of the knowledge to be shared in the organization (Grant, 1996).

To better understand the challenges of transferring knowledge, it is necessary to examine the forms that knowledge takes within an organization. The distinction between knowing how and knowing about, or tacit and explicit knowledge, is crucial in shaping how knowledge is shared, absorbed, and applied. Therefore, the subsequent subsection will discuss this in greater detail.

2.1.1 Tacit and Explicit Knowledge

The distinction between tacit and explicit knowledge made by Polanyi has given rise to extensive research on organizational knowledge (Polanyi, 1962; Polanyi, 1966; Orlikowski, 2002). Tacit knowledge relates to an individual's ability to analyze and understand their actions. The result of actions transforms into know-how embedded in one's mind and body. An example of tacit knowledge is knowing how to ride a bike, where one might be able to explain the mechanics of motion but simply not have the slightest idea of how the complex muscular coordination is executed (Polanyi, 1962). Consequently, tacit knowledge becomes non-codifiable as the interaction between cognitive and technical elements creates a personalized perspective. On the contrary, explicit knowledge is codifiable and transmittable in formal language. Individuals could, therefore, share knowledge through conversations or by sharing documents. Additionally, explicit knowledge could be stored in historical records, such as databases, making it easier for individuals to share their knowledge (Nonaka, 1994).

There are two perspectives on the relationship between tacit and explicit knowledge within knowledge literature: knowledge as a category and knowledge as a continuum. Knowledge as

a category is the earliest and most accepted view of organizational knowledge, perceiving tacit and explicit as two distinct types. The alternative view sees knowledge as on a continuum between the extremes of completely tacit or explicit. All knowledge is therefore argued to have elements of both tacit and explicit components (Jasimuddin et al., 2005). Nonaka (1994) developed one of the most influential models in the overall knowledge literature (Gourlay, 2006), trying to explain the dynamic and continuous dialogue between tacit and explicit knowledge through the SECI model with its four different patterns of interactions. The patterns of socialization, externalization, combination, and internalization represent ways in which existing knowledge can be converted into new knowledge.

To begin with, socialization allows the conversion of tacit knowledge through interactions between individuals, where the receiver embodies the interaction into tacit knowledge. Acquiring knowledge through this mode does not necessarily require language or communication, as the tacit, non-expressible but is perceived through beliefs and perspectives. The key objective is to gain tacit knowledge through experiences such as apprenticeships or on-the-job training. As socialization describes the tacit-tacit relation, combination is the mode of sharing explicit-explicit knowledge. A practice of such is the combination of different bodies of explicit knowledge held by individuals. An example could be a summation of existing information where the individual reconfigures the knowledge by sorting, adding, or recontextualizing. Consequently, *new* knowledge could be generated by enabling a new perspective of existing explicit phrasing. Externalization and internalization refer to the conversion of knowledge, involving both dimensions of knowledge creation. In the externalization phase, the individual converts tacit into explicit knowledge through metaphors to convey perspectives and know-how into words. This tacit knowledge is, as aforementioned, non-codifiable. Parts of the knowledge will then be extracted and converted. Internalization, on the contrary, depends on the action process where an individual is required to "learn by doing" to internalize the knowledge and connect the knowledge to beliefs and perspectives (Nonaka, 1994; Nonaka & Takeuchi, 1996).

Moreover, Nonaka's conceptual framework has been criticized for being too simplified and ignoring the complexities surrounding actions and Polanyi's definition of tacit (Orlikowski, 2002; Gourlay, 2006). Nonaka responded to this, arguing that tacit and explicit knowledge were to be distinguished along a continuum and, therefore, depend on the 'tacitness' of the knowledge (Nonaka & Krogh, 2009). In all, Nonaka implicitly aligns with knowledge as a continuum perspective. Moreover, Tsoukas (1996) reasons that tacit knowledge is inseparable from what is defined as explicit knowledge, which also resembles the perspective of knowledge as a continuum. All knowledge hence depends on the tacit knowledge base of the individual, indifferent to the situation (Tsoukas, 1996). Thus, one's skill in communicating one's perspective and knowledge becomes crucial in a knowledge transfer.

Viewing knowledge as an entity and something that can be transferred creates a strategic dilemma for organizational managers. Tacit knowledge, which is embedded in employees' experiences and actions, is inherently less accessible and, therefore, becomes less exposed to external exploitation. This inaccessibility, however, limits its availability to users within the

organization who could benefit from it. Thus, to enhance the knowledge transfer, managers may seek to convert the knowledge from being tacit to explicit. Nevertheless, by making knowledge explicit, the organization increases its vulnerability as the knowledge becomes more exposed to exploitation. Managers must balance the trade-off between preserving the value of tacit knowledge and enhancing the efficiency of knowledge transfer through its codification and dissemination (Jasimuddin et al., 2005). Navigating this complex challenge requires thoughtful consideration. As knowledge varies in form and complexity, understanding the mechanisms for how an organization reaches an effective knowledge transfer becomes essential.

2.2 Knowledge Transfer

Studies have over the years indicated a positive correlation between knowledge sharing and improved organizational performance (Wang & Wang, 2012; Ali et al., 2019; among others). Knowledge transfer within an organization is thus critical to facilitating the transfer of expertise, skills, and information from one person or team to another. Regarded as a core function within the realm of knowledge management, knowledge transfer aims to hinder the creation of knowledge silos and instead promote valuable organizational assets. An organization that can successfully transfer knowledge within its boundaries is believed to reap the benefits of improved efficiency and innovation practices. Szulanski (1996) further argues that firms experience greater adaptivity, productivity, and competitiveness than those struggling with knowledge transfer.

Although Vaghefi's (2018) literature review reveals no distinct, generally accepted definition of knowledge transfer, many include two core dimensions. First and foremost, an exchange of knowledge between a sender and a receiver, or from one unit to another, must exist. Second, this knowledge needs to be used and learned by the receiver. Thus, knowledge transfer implies a two-way street that relates to the actual transfer of knowledge and the learning caused by it. Lockett et al. (2009) define it as "the two-way transfer of ideas, research results, expertise or skills between one party and another that enables the creation of new knowledge" (p. 664). Argote (2024) refers to knowledge transfer as the process through which one unit is affected by or learns from the experience of another.

Some overlapping terms used in previous research are worth mentioning to study the phenomenon of knowledge transfer. Argote (2024) explains knowledge transfer to be synonymous with knowledge spillover. Economists often use spillover to describe the knowledge that unintentionally spills over or transfers within or across organizations. Several other previous studies have focused on knowledge sharing (McDermott & O'Dell, 2001; Bock et al., 2005; Mariano, 2013), which mainly emphasizes the transmission of knowledge between two people. Nonetheless, similar to Vaghefi (2018) and Shahbaznezhad et al. (2019), we treat the terms sharing and transfer as interchangeable throughout the study.

Knowledge transfer relies on certain mechanisms to facilitate the movement of expertise and skills, broadly categorized into formal and informal processes. Formal mechanisms are systematically structured approaches such as documentation and mentorship programs. In contrast, informal processes are crucial for transferring mainly tacit knowledge and include, to a large extent, social interactions.

Understanding that knowledge transfer involves more than simply making knowledge available, scholars have increasingly focused on the specific conditions that facilitate or hinder transfer processes. These include individual-level factors such as motivation, relational dimensions like trust, and organizational enablers. The next section will explore these enabling and constraining factors in greater detail.

2.3 Theoretical Framework of Knowledge Transfer

The knowledge transfer occurs between entities in a structure containing factors that either support or hinder knowledge transportation from the sender to the receiver. The enablers constitute supporting mechanisms in the knowledge transfer, allowing the sender to share or the receiver to capture the transponded message. Barriers, on the contrary, could constrain the sender from conveying the intended message or the receiver from receiving, thus hindering the knowledge transfer. Finally, the transfer is encapsulated within an organizational context, which affects all components. However, in this study, the organizational context is interpreted at the divisional level, in alignment with the specific focus and scope of the research. See Figure 1 for a visual representation.

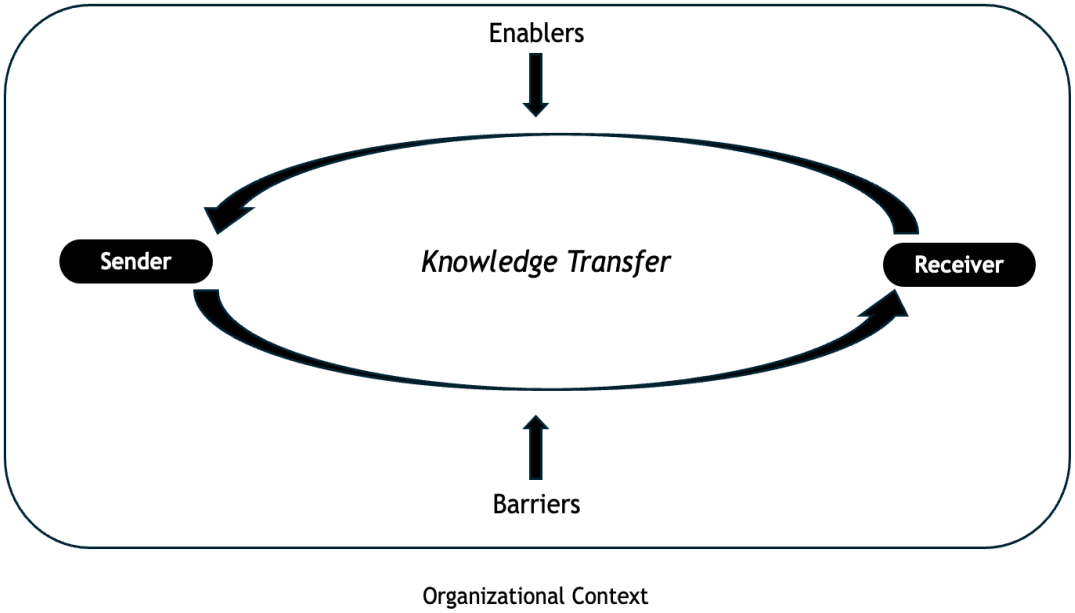

Figure 1 - Own Schematic Representation of Knowledge Transfer

To enable isolated analysis and better distinguish between enablers and barriers to knowledge transfer, these two contrasting factors are assigned into four key dimensions: knowledge

itself, knowledge sender and receiver, knowledge exchange, and organizational context (as inspired by Vaghefi et al., 2018; Shahbaznezhad et al., 2019). The aim is to identify and predict how a successful knowledge transfer is conducted and shaped in the dyadic relationship.

2.3.1 Enablers to Knowledge Transfer in Theory

The enablers displayed in Table 1 illustrate enablers to facilitate knowledge transfer, inspired by the work of Vaghefi et al. (2018) and Shahbaznezhad et al. (2019). While existing literature has identified and brought forward numerous enablers to knowledge transfer, the following have been identified as broad and significantly important. Each enabler has shown recurrent relevance across sectors, suggesting a degree of transferability that makes them particularly valuable for both theoretical exploration and practical application. In this sense, the chosen theoretical enablers serve not only as variables of interest but also as a conceptual lens through which the dynamics of knowledge transfer can be critically examined.

Table 1 - Theoretical Enablers to Knowledge Transfer

Related Context	**Enabler**	**Definition**
Knowledge	Availability	The degree to which knowledge is accessible and easily available for use.
Knowledge Sender and Receiver	Ability	Refers to the ability and capacity to apply acquired knowledge, skills, background, and experience to disseminate knowledge to the counterpart.
	Motivation	The extent to which individuals are willing to share knowledge and believe in its value and recognition.
Knowledge Exchange	Trust	The credibility and reliance of the sender/receiver of knowledge.
	Tie Strength/Closeness	The extent of frequency of interactions and proximity within a relationship.
Organizational Context	Culture	Behavioral norms, values, and characteristics of a collective. The extent of its presence influences interpersonal interactions and an individual's intention to engage in KT behavior.
	Context	The extent to which the organizational context facilitates the development of KT.
	Structure	The degree of bureaucracy, hierarchy, and organizational flexibility shapes how formalized and regulated KT practices are within the organization.

Enablers assignable to the entity of knowledge

The key component of knowledge transfer is knowledge itself. While enablers could enhance the sharing between individuals, the availability of knowledge is necessary to enable the exchange. Availability depends on two mechanisms, the sender's opportunity to contribute knowledge and the receiver's willingness and ease to seek it (Benbya, 2016; Nakauchi et al., 2017). Conversely, if an individual cannot access or use what is known, he cannot share it with the counterpart. However, it is important to distinguish between tacitness and availability since knowledge, despite being explicit, refers to the choice of sharing knowledge rather than the potential chance (Vaghefi et al., 2018). An individual could possess explicit knowledge, but be hesitant to share it. The availability of a knowledge transfer would then be low.

Furthermore, even if the sender makes the knowledge available, its accessibility still influences the receiver's ability to use it. Therefore, ease of access and usability are crucial when considering availability (Vaghefi et al., 2018). For instance, an individual with high relatedness, who can see the applicability of the knowledge in their work to solve a problem, is more likely to perceive availability as high, in contrast to someone without a clear area of applicability (Watson & Hewett, 2006). The possibility of knowledge transfer thus becomes higher with a sender prone to share and a receiver more likely to receive. The easier it becomes to access knowledge, the easier it becomes to adapt it to one's practices. By ensuring a climate that increases the opportunities to make knowledge available, the availability becomes higher. Organizations can enhance the process of accessing knowledge by implementing knowledge platforms that enable receivers to actively seek the knowledge they need (Benbya, 2016).

The availability of knowledge is more important in groups than between groups, as it could entail implications for problem-solving (Nakauchi et al., 2017) and, consequently, the performance of a group. It is therefore an important enabler to consider.

Enablers assignable to the sender and receiver of knowledge

As availability forms the foundation of knowledge, the ability and motivation of both agents are important enablers for knowledge transfer. Without these two enablers, the knowledge is neither articulated nor transferred. To begin with, a sender's ability to concentrate and communicate relevant knowledge is called disseminative capacity and is necessary for an effective transfer. An individual must be able to find, manage, and share knowledge to enable the creation and transfer of new knowledge. Characteristics such as communication, credibility, and cultural values have some influence on the transfer (Kang & Hau, 2014; Vaghefi et al., 2018). Therefore, a sender that can contextualize and communicate the knowledge in a way that is more understandable for the receiver will also convey more of its knowledge (Vaghefi et al., 2018). Thus, the greater the level of shared prior experiences, the less ambiguous the knowledge transferred will be (Shahbaznezhad et al., 2019).

Meanwhile, the sender's dissemination capacity is mirrored by the receiver's ability to utilize and absorb the knowledge. This capability is influenced by the skills, existing knowledge,

and prior experiences of the receiver (Vaghefi et al., 2018). If an individual lacks these shared characteristics, there might be an intended or unintended resistance to learning and accepting knowledge, subsequently leading to low absorption (Kang & Hau, 2014; Nakauchi et al., 2017). If individuals recognize the value in sharing, the outcome, and the knowledge itself, they will be more willing to share or receive it (Watson & Hewett, 2010). Thus, motivation becomes an important enabler due to its interrelatedness with the ability to share and transfer knowledge.

Enablers assignable to the knowledge exchange

The knowledge exchange depends on several factors intertwined with the enablers for the sender and receiver. Two of these are trust, affecting the accuracy and credibility of knowledge transfer, and closeness between the parties, relating to the extent and frequency of interactions between two individuals (Shahbaznezhad et al., 2019). Stronger ties between the parties facilitate the transfer of complex knowledge as they encourage close and more frequent interactions (Levi & Cross, 2004). Stronger ties are also more effective in the transfer of complex and tacit knowledge, which is often difficult to absorb without additional understanding and interaction (Hansen, 1999). Additionally, closeness has subsequently been shown to increase trust positively related to sharing tacit and explicit knowledge (Levin & Cross, 2004; Ghobadi, 2015). The reason for this may be the incentives created for the sender as they become more comfortable sharing complex knowledge with the receiver, and thus are more willing to adapt their language. The skill of performing appropriate communicative behavior enables an increased efficiency of the knowledge transfer and therefore constitutes an important facilitator (Shahbaznezhad et al., 2019). Beyond communication, frequent interactions could also, over time, give rise to shared values, routines, and experiences, facilitating a smoother knowledge transfer (Vaghefi et al., 2018). This may lead to greater confidence in the credibility and value of the knowledge by the receiver, making them more prone to absorb the transferred knowledge.

A higher level of trust could lead to an increased willingness to share and receive knowledge (Nakauchi et al., 2017). More frequent interactions could additionally lead to an increased closeness within a group, which could foster a belief in the mutual sharing of knowledge. This would, over time, lead to increased efficiency as individuals are aware of the possessor of sought knowledge, a dynamic trade-off system, and a common focus to create valuable output (Watson & Hewett, 2010). Wang (2016) further explains that stronger ties enhance relational capital, leading to a deeper understanding among colleagues and, in turn, more effective knowledge sharing. Therefore, closeness and trust constitute important enablers to understanding factors related to knowledge exchange.

Enablers assignable to the organizational context

The organizational context relates to the organizational climate, social and cultural factors that influence the parties and their existing relationships (Benya, 2016). Szulanski et al. (2004) have shown that a supportive context is likely to contribute to the accuracy of knowledge transfer as the room for mistakes increases. An organizational culture is important as it fosters willingness and acceptance among its employees. When employees believe

management prioritizes high performance over collaborative efforts that enhance project or company value, they are more likely to withhold knowledge intentionally (Milne, 2007). It, therefore, becomes important to foster willingness and trust among employees. Organizational culture could enable a common language, understanding, and supportive culture by creating collective characteristics. This would, over time, shape behavioral norms and values that influence the interactions between individuals and their intention toward knowledge transfer (Vaghefi et al., 2018; Shahbaznezhad et al., 2019; Azeem et al., 2021). Organizational culture, hence, emerges as an enabler to the knowledge transfer process.

Moreover, the organization's structure could influence the knowledge transfer between agents. A more hierarchical structure characterized by clear roles and responsibilities may entail reduced barriers to reciprocity between employees. This would additionally bring increased transparency and insights into the location of knowledge. Nevertheless, a less formal structure relies more on trust and collaboration. Thus, the organization's structure could be facilitated as an enabler but is highly integrated with others (Van den Hooff & Huysman, 2008). Beyond the structural and cultural dimensions, if knowledge transfer is supported, nurtured, and cared for within teams, it will also be highly valued among employees. Thus, responsibility-leadership in a group, where leaders encourage employees to seek and share knowledge, becomes an enabler, as employees become more inclined to engage in knowledge-seeking and sharing (Shahbaznezhad et al., 2019).

2.3.2 Barriers to Knowledge Transfer in Theory

The barriers displayed in Table 2 illustrate the barriers that may hinder knowledge transfer, inspired by the work of Vaghefi et al. (2018) and Shahbaznezhad et al. (2019). While existing literature has identified and brought forward numerous barriers to knowledge transfer, the following have been identified as broad and significantly important. The barriers consistently demonstrated relevance across various sectors, indicating a level of transferability that enhances their value for both theoretical exploration and practical application. In this context, the selected theoretical barriers function not only as variables of interest but as a conceptual lens through which the dynamics of knowledge transfer can be critically analyzed.

Barriers assignable to the entity of knowledge

Several factors of knowledge may hinder an individual's attempt to transfer it. The complexity, level of tacitness, and causal ambiguity are some of the evident barriers (Vaghefi, 2018). The complexity of knowledge refers to the level of expertise required to understand it and the complicated connections among people, processes, and resources. For example, understanding one aspect of knowledge might require access to broader information or previous organizational experiences. When knowledge becomes deeply embedded in the routines and processes of organizations, transferring that knowledge becomes challenging and time-consuming.

Table 2 - Theoretical Barriers to Knowledge Transfer

Related Context	**Barrier**	**Definition**
Knowledge	Complexity	Refers to the extent to which knowledge is highly detailed, individual, or technically advanced.
	Casual Ambiguity	The degree of lack of understanding between the determinants and the consequences of one's actions.
	Tacitness	Refers to the degree of knowledge that is implicit, experience-based, and difficult to articulate or document.
Knowledge Sender and Receiver	Absorptive Capacity	Implies the ability to assess, apply, and institutionalize acquired knowledge.
	Power	The perceived influence of an individual's knowledge within the organization or sense of superiority over colleagues.
	Motivation	The degree of willingness to engage in and belief in the value of transferring knowledge.
	"Not Invented Here"	Refers to a resistance to adopting externally developed knowledge, as opposed to internally developed.
Knowledge Exchange	Trust	The level of confidence in one's reliability and intention.
	Distance	Refers to the physical, social, or intellectual gap between individuals.
	Communication Skills	The ability to effectively convey, adapt, and deliver a message.
Organizational Context	Culture	The shared values and norms that shape individual attitudes, behaviors, and openness.
	Structure	The degree of bureaucracy, hierarchies, and predetermined processes.

Moreover, the tacitness of knowledge, the non-codifiable aspect of knowledge, has been shown to slow the transfer. The higher the level of tacitness, the more difficult it becomes to transfer. The specific degree of tacitness can depend on intangible factors like experiences, beliefs, and values, effectively shaping how knowledge is understood and shared among individuals. A high tacitness in a decentralized high-technology environment constrains the coordination within a project as the information becomes considered unanalyzable and consequently creates frustration among the participants. The negative implications could be prevented through the application of a more centralized approach and collaboration. On the other hand, this may only be realized as the knowledge has to be transferred across group boundaries (Nakauchi et al., 2017).

Finally, the degree of lack of understanding between determinants and consequences of one's actions constitutes a major barrier to knowledge transfer. Firms often strive to replicate internal practices across different departments or teams. These are the practices that have previously led to a successful outcome, hence the desire to spread the knowledge around them. The challenge in this process is causal ambiguity, which is the ability to understand which knowledge is essential for colleagues. Considering that it is not always clear what specific insights contribute to problem-solving or innovative solutions, a given uncertainty is evident across many, if not all, attempts to transfer knowledge within organizations. Defining a list of knowledge required to be transferred to do something a certain way can be merely impossible, let alone the difficulty of measuring the impact of each knowledge piece. As Szulanski (1996) puts it, "Just as a firm's distinctive competencies might be difficult for other firms to imitate, its best practices could be difficult to imitate internally". Easterby-Smith et al. (2008) further add that causal ambiguity slows down and hinders attempts at knowledge transfer.

Barriers assignable to the sender and receiver of knowledge

This subsection refers to the barriers, or challenges, perceived by individuals engaged in knowledge transfer. The receiver of a transfer can experience a lack of motivation, particularly when they feel disconnected from the sender of knowledge. This resistance can be derived from an internal perspective of the "Not Invented Here" (NIH) syndrome, as explained by Szulanski (1996). Teams or individuals may disregard valuable knowledge because it comes from someone else in the organization. If the receiver feels disconnected from the sender and can't relate to their methods or practices, they may hesitate to adopt them.

Furthermore, receivers might lack the absorptive capacity to make sense of new knowledge. Cohen and Levinthal (1990) further explain that an individual's absorptive capacity is largely a function of their preexisting stock of knowledge. Yeoh (2009) recognizes the inability to exploit transferred knowledge as the main barrier to achieving an effective knowledge transfer. Receivers who lack an absorptive capacity fail to transform and effectively use the transferred knowledge. Additionally, Easterby-Smith et al. (2008) argue that a sender might also lack an absorptive capacity, meaning they may struggle to recognize the valuable impact of sharing knowledge and transferring it effectively to other individuals.

A sender can be reluctant to share knowledge due to several motivational factors. For example, employees may be reluctant to transfer their knowledge because they do not experience anything in return. Even though some benefits can be anticipated, Disterer (2000) argues that the question "What is in it for me?" is often unclear. Therefore, a prerequisite of knowledge transfer is the assumption of a give-and-take, or equilibrium, between colleagues to achieve a sense of mutual gain.

Sharing valuable information might lead to losing power, as it could diminish an individual's perceived importance for the organization or even superiority among colleagues. Moreover, the sender might experience a lack of recognition for actions taken to share their knowledge. Consequently, there is often a risk that future knowledge-sharing efforts are entirely disregarded. Additionally, as knowledge transfer is time-consuming, individuals might simply lack the time and resources to engage in knowledge-sharing activities. Since the sender is responsible for articulating their expertise in an accessible and understandable way, they may be required to devote substantial time to also understand the receiver's needs (Shahbaznezhad et al., 2019).

Barriers assignable to the knowledge exchange

As knowledge is widely believed to be socially created and formed through relationships, difficult or troublesome relationships among individuals might inhibit knowledge transfer.

To influence the behavior of others or effectively transfer your knowledge to someone else, the receiver must hold a certain credibility and trustworthiness. For example, a doctor with legitimate expertise and professional authority can effectively guide patients to make better-informed health decisions. However, when the sender of knowledge is not perceived as trustworthy or holds relevant expertise, an initiated transfer of knowledge will be more difficult and challenged, if not completely resisted (Szulanski, 1996). Without trust, efforts of knowledge transfer will be met with skepticism. Additionally, a lack of trust has been shown to lower the motivation for an exchange to be initiated (Inkpen & Pien, 2006; Riege, 2005). Inkpen and Tsang (2005) further add to the notion of low trustworthiness within the exchange process. The authors argue that it may be risky as the sender depends on the receiver to use the transferred knowledge responsibly and carefully.

Moreover, a distant relationship can also hinder the transfer. A distant relationship could be either physical, social, or intellectual. Physical proximity will often facilitate a more effective transfer process, or at least the opportunities for it. Moreover, the intellectual relationship between individuals needs to be relatively close for the receiver to understand and grasp the transferred knowledge. Read more on this in the subsection on absorptive capacity. Finally, Sarker et al. (2005) argue that a lack of communication skills hinders knowledge transfer because it affects discussions of opinions and ideas between individuals, which is a requirement for knowledge to flow across units.

Barriers assignable to the organizational context

Knowledge transfers are inherently embedded into an organizational context, whose characteristics may affect the success of the transfer. Szulanski (1996) illustrates it through a plant that may grow successfully in one garden and poorly or not at all in another. Like the plant, the development of a knowledge transfer can have several differing outcomes depending on the context. An organizational context that facilitates the transfer of knowledge can thus be seen as a fertile environment.

Structures, systems, and firm culture are further argued to be factors that affect the outcome of knowledge transfer attempts. For example, an organizational culture that builds on strong relationships between individuals will experience an easier process than one with distant relationships, as mentioned in the previous subsection. More specifically, transfers of tacit knowledge require multiple interactions (Nonaka, 1994), hence the importance of having strong connections and facilitating clear communication within the organization so nothing gets lost. A supportive and collaborative culture may aid the transfer process, while limited freedom may do the opposite. Additionally, a rigid structure characterized by several rules, hierarchy, and strong top-down control can be a barrier (Vaghefi, 2018). In particular, rigid structures with limited interactions among individuals reduce the opportunity required to engage in knowledge transfer.

2.3.3 Knowledge Transfer Process

It has previously been mentioned that a knowledge transfer process yields greater adaptation and strategic competitive advantage for firms. However, the process's specific structure has yet to be explained. The literature reveals various methods for transferring knowledge. Nevertheless, one process stands out due to its flexibility in adapting to differing organizational needs and conditions and has become widely recognized throughout knowledge transfer literature. As presented and described by Szulanski (1996), the unfolding process is a sequence of stages that facilitate a successful knowledge transfer. The author emphasizes its critical role in generating a higher capacity and enabling the receiver to absorb knowledge effectively. It consists of four stages: initiation, implementation, ramp-up, and integration. The four stages are described and thereafter visualised in Figure 2.

The first stage, initiation, includes all events that lead up to the decision to transfer knowledge. It starts with and requires a coexisting need for knowledge and the relevant knowledge to meet that need. The decision further depends on an individual's assessment of the current situation and their ability to transfer. Cummings & Teng (2003) emphasize the importance of ensuring that the knowledge is ready for the next stage by adapting it to the receiver's level of understanding. In other words, the sender must articulate knowledge in a way that makes it accessible or understandable to the receiver.

Following the first stage, the implementation stage begins when a decision to transfer is made. Transfer-specific social ties between the sender and receiver are established, and the knowledge is further adapted to suit the receiver's needs. The relationship between actors and

their ability to communicate influences the exchange or transfer itself. The flow of knowledge continues until the point when the recipient has received and started using the knowledge (Szulanski, 1996).

After the receiver has started using the knowledge, the third stage of ramp-up is in progress. More specifically, this includes identifying and solving unexpected problems. Although this stage may initially entail inefficiency, the receiver will gradually improve its knowledge exploitation and performance. Szulanski (1996) argues that a certain absorptive capacity of the receiver is crucial to understanding and applying the knowledge that has been transferred. Additionally, this stage is highly dependent on the previous stage and the nature of the knowledge exchange.

At the last stage, integration, the knowledge is successfully used and is rather evident in everyday practices. Here, a shared understanding and coordination between the parties aid the institutionalization process. While Szulanski (1996) specifically emphasizes coordination within the integration stage, Graham et al. (2006) add that strong cooperation is needed throughout the entire four-stage process. The final stage, however, is a gradual process in which the transferred knowledge is progressively retained and becomes an integral part of the receiver's knowledge base.

Cummings and Teng (2003) further stress the importance of the relationship between the source and receiver in the knowledge transfer process. The given relationship helps both parties assess the gap between their areas of expertise and determine the level of collaboration needed for knowledge transfer. However, if the receiver is too deeply involved, the organization might lose potential advantages from having different research domains and areas of expertise. Additionally, an overly strong relationship and high involvement may lead to overconfidence and subsequent gaps in the knowledge transfer. On the other hand, if the receiver is not involved enough, significant resources might be required for training and knowledge dissemination. This highlights the need to balance collaboration between the sender and receiver and build relationships that can positively influence how the knowledge is transferred. Essentially, the receiver must be able to understand and apply the knowledge without undermining the advantages of having distinct areas of expertise.

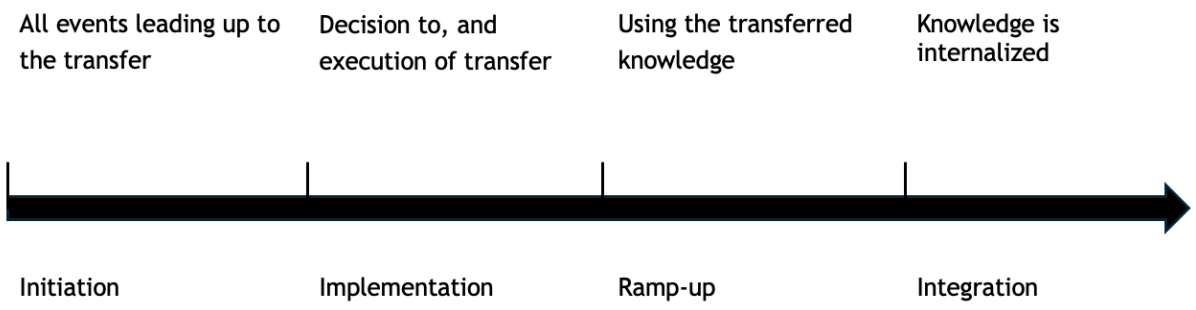

Figure 2 - Conceptual Model of the Knowledge Transfer Process

To conclude, the knowledge transfer process is influenced by multiple interrelated factors. While the degree of knowledge tacitness shapes the nature of the iterative interaction between the sender and receiver, the organizational context encapsulates the exchange. Additionally, the interactions are isolated between two agents, which are presumed to have, or not have, a relation to each other, which may affect the ease and effectiveness of sharing knowledge. Thus, these considerations are integrated into the framework used and presented in Figure 1 to identify how existing enablers and barriers influence knowledge transfer practices across two research divisions at an automotive manufacturing firm. The next section will introduce the study's methodological framework.

3. Method

This section outlines the methodological choices made in the study, explaining the rationale behind the selected research strategy, research design, and data collection deemed most suitable to explore how existing enablers and barriers influence knowledge transfer practices across two research divisions at an automotive manufacturing firm.

3.1 Research Strategy

Scholars often distinguish between two primary research strategies: quantitative and qualitative. Although some regard the distinction as impractical or unhelpful, there is evidence of its continued, growing use within the academic community (Bell et al., 2019). Notwithstanding, the research strategy provides an overarching framework that guides the methodology and direction for conducting business research. Both quantitative and qualitative approaches possess strengths and weaknesses, and their use is contingent on the specific context of their application (Marshall, 1996). This subsection will initially present the different strengths and weaknesses of the two approaches before explaining why the qualitative approach is deemed most suitable.

Quantitative analysis is based on the philosophical principles of positivism, which emphasizes the quantification of data and the pursuit of an objective truth. However, the effectiveness of a quantitative approach is largely dependent on how accurately the sample reflects the population. Additionally, its inability to capture the intricacies and nuances of human behavior is widely questioned. On the contrary, a qualitative approach rejects the norms and practices of positivism and emphasizes how individuals interpret their social world. This philosophical stance aligns with interpretivism and implies that complete objectivity is unrealistic, a directly opposite view of positivism. Albeit praised for its ability to provide deep insights into human behavior, the qualitative approach is often criticized for its inability to generalize due to the unique contexts of human experiences (Bell et al., 2019).

The choice of the qualitative method, along with the use of a comparative study and an abductive reasoning process, is discussed further below.

This study aims to follow an abductive reasoning process rather than a purely inductive reasoning approach, the latter previously being common for qualitative research (Bell et al., 2019). Moreover, as Mantere and Ketokivi (2013) argue, abductive reasoning serves as a response to the limitations of both inductive and deductive approaches. Nevertheless, the abductive reasoning process typically begins with a puzzle or a surprising observation. In the context of our study, the puzzle is the emerging importance of facilitating continuous knowledge transfer practices in an increasingly competitive knowledge-driven landscape. However, specific enablers or barriers within the selected organization remain unaddressed. Therefore, the chosen research question aims to address these more in-depth and identify actionable steps the organization can take to improve its knowledge transfer practices. Through this process, the research aims to generate a more nuanced understanding of how knowledge transfer practices can vary and what key enablers or barriers exist, potentially leading to a refined framework that can be used for strategic adaptation, creating more adaptable and productive research divisions. The abductive approach will be applied using qualitative data gathered through interviews and an extensive literature review to explore the complex dynamics in play. Choosing a qualitative approach with an abductive reasoning process leads to the conclusion that positivism, which strives to be completely value-free and objective, does not align with the nature of the study. While subjectivity is thus inherently unavoidable, efforts are made to minimize its influence.

Nevertheless, the choice of a qualitative strategy was made to gain an in-depth understanding of how knowledge transfer practices vary within different research divisions and what enablers or barriers may exist and influence the process. A qualitative approach is particularly suitable because it allows for exploring complex organizational experiences, including the subjective decisions made in nuanced, context-specific environments within each research division. Given that subjective and human-driven decisions inherently influence knowledge transfer, qualitative methods allow for a rich understanding that uncovers the reasoning behind decisions. While a quantitative approach can identify trends and correlations, it often cannot delve deeper into human motivations and form an understanding of how and why decisions are made (Bell et al., 2019). For example, the reason an employee might choose to share knowledge with some, but not all, colleagues can be identified through rich conversations about their previous experiences.

Although considered suitable for the current study, the qualitative approach is subject to several criticisms, some of which have been introduced briefly. The issue of subjectivity is often highlighted as a major drawback, as the research is based on the researcher's subjective observation and interpretation of data (Bell et al., 2019). This is mitigated partly as two researchers will independently analyze the material to ensure a balanced understanding. This collaborative process strengthens the study's credibility and helps reduce the risk of individual bias. Generalization problems occur due to fewer cases represented in the research, where the focus lies on the depth of insights rather than the breadth. To deal with these

critiques, quality criteria are introduced to justify the selection and ensure the qualitative research is appropriately outlined. These include dependability, credibility, transferability, and confirmability (Bell et al., 2019). Each criterion's fulfillment is crucial to guarantee that the study's results are effectively understood and can potentially be replicated by other scholars, and will be further delved into in subsection 3.5.

3.2 Research Design

Opting for a specific research strategy is only the beginning of conducting business research. Research design outlines the approach to collecting and analyzing data. It encapsulates several different techniques, often related to a specific research method. Frequently used designs include experimental, cross-sectional, longitudinal, case study, and comparative designs (Bell et al., 2019). Regardless of the chosen design, our selection reflects deliberate decisions made throughout multiple stages of the research process, and is further delved into below.

For the current study, a comparative design is deemed most appropriate. Bell et al. (2019) emphasize that a comparative design for qualitative research focuses on two or more cases where some comparison is sought between them. Although the study is focused on one organization, the core of the study involves a direct comparison between two distinct research divisions in terms of their differing strategies for transferring knowledge and the present enablers or barriers that influence the knowledge transfer process. Through the comparative design, we aim to draw interesting cross-case conclusions and identify patterns or irregularities between the research divisions.

Moreover, a comparative approach allows a deeper exploration of how internal influences shape the research divisions. The approach will highlight variations in organizational dynamics and knowledge transfer practices. While an established research division with a successful track record may benefit from a cohesive internal culture and standardized processes, a division that has experienced significant transformation may face greater complexities given a change in core engineering direction and new work methodologies. Through this comparison, the study seeks to offer a richer understanding of how research divisions within an organization can navigate the challenges of knowledge transfer, ultimately contributing to academic literature and practical strategy development. Critics of the comparative approach could argue that it is difficult to replicate and generalize findings due to the scope and subjectivity (Bell et al., 2019).

Knowledge transfer inherently requires at least two individuals and frequently takes place within groups in organizations. For example, employees in certain divisions of the case company often share knowledge with their respective teams. While knowledge arguably exists within the organization as a whole and constitutes one of its main strategic intangible assets, it is typically embedded within different departments, teams, and individuals. Although individual approaches to knowledge transfer may differ, broader patterns such as

common practices, barriers, and key enablers that influence knowledge transfer tend to emerge at the group level, making it the most suitable level of analysis for the study.

Bell et al. (2019) further highlight the distinction between a research design and a research method, where the latter is simply a technique for collecting data. Hence, the research method will be developed in alignment with the overall structure of the research design and will be outlined in the following section.

3.3 Data Collection

The data collection serves as a twofold foundation for the analysis, linking theoretical insights with empirical observations. The first component presents a systematic approach to reviewing literature samples to evaluate previous research. The second component delves into the planning and gathering of respondents' observations.

3.3.1 Literature Review

A systematic literature review has been conducted to avoid biases and demonstrate the depth of existing research, which aligns with the practices of Bell et al. (2019). The process began with identifying central keywords, presented in Table 3, relevant to the overarching research theme. These keywords were used to identify foundational literature and more recent systematic reviews to unravel how enablers and barriers influence knowledge transfer. The literature was sorted by citation count and publication year, initially across all available years, secondly, on the most recent ten years, and lastly, on the most recent five years. To ensure the inclusion of the most current research, we worked iteratively with the latest publications, reviewing less-cited papers to capture new developments in the field. In all, the initial gathering was conducted to ensure a balanced representation of established knowledge and more recent perspectives in the area. The strategic process involved reviewing abstracts, introductions, and conclusions to determine relevance.

Table 3 - Keywords of Data Gathering

Keywords		
Knowledge Management	Knowledge Sharing	Knowledge Transfer
Tacit AND Explicit	Tacit Knowledge	Explicit Knowledge
Organizational Knowledge	Organizational Knowledge AND Knowledge Transfer	Knowledge Transfer AND Barriers
Knowledge Transfer AND Enablers	Organizational Knowing	

The keywords were applied in the databases SCOPUS, Google Scholar, and Supersök at GU to ensure both the quality of sources and the inclusion of items potentially relevant to the research. To ensure a focused and effective review, inclusion and exclusion criteria were applied to guide the selection of relevant literature. To begin with, as nuances and definitions of knowledge could differ between languages, only literature published in English was included to ensure consistency in language and interpretation. This excludes all publications in other languages. Moreover, peer-reviewed literature is deemed critical to ensure credibility. The literature was, furthermore, narrowed to sources specifically related to business management within a non-service context. This has twofold implications for our collection of material. On the one hand, it introduces potential bias in the selection of material; on the other hand, it ensures relevance and coherence of the literature gathered.

The systematic approach is intended to demonstrate the depth of existing research while preserving comprehensiveness and transferability to the reader. Following the initial selection of key sources, a snowball approach was used (Hiebl, 2021), where the reference lists of relevant literature were examined to identify additional relevant literature, particularly those that may not have surfaced through database keyword searches alone. Moreover, to complement the more recent central systematic reviews, a forward search was conducted, supported by the mentioned databases and consensus.ai. Despite the wide range of keywords used during the data collection process, the results, coupled with the snowball approach and forward search, showed considerable convergence across sources. This led to a natural point of saturation over time. Overall, this methodology aims to strengthen the quality of the literature review while making sure that existing contributions are included in a structured way.

While the literature review illustrates an overview of existing literature, the research question remains uncontextualized in the absence of robust empirics. Thus, the following subsection will delve into the empirical collection process, providing a basis for analyzing the knowledge transfer in the case company to the existing literature.

3.3.2 Primary Data Collection

The literature review enables a theoretical overview, and the empirical collection provides the researcher with insight into the social world. The primary empirical data collection was conducted through interviews with the organization’s employees, each belonging to one of the two specific research divisions.

To begin with, there are multiple approaches to choose from when qualitatively interviewing. Three major approaches include unstructured, semi-structured, and structured interviews. Semi-structured interviews will be used throughout the study due to their nature of exploring the subject in depth while maintaining flexibility, particularly important given the somewhat differing roles of respondents within each division. It further allows for probing and ensures a thorough explanation and understanding of insights. The semi-structured interview technique

differs mainly from the structured approach, allowing for open, free-flowing conversation (Creswell & Plano Clark, 2017; Bell et al., 2019).

A drawback of the semi-structured approach is the difficulty in data analysis when the open-ended questions entail rich data. The analysis easily becomes time-consuming and could be open to biases. However, to ensure a relevant basis for analysis, the interview guide was constructed based on related literature and the framework presented in Figure 1 to deepen the analysis and strengthen eventual theoretical alignment.

Furthermore, Bell et al.'s (2019) preparation guidelines were followed to create a comprehensive and thorough interview guide. The belonging interview guide, displayed in Appendix A1, was designed to capture key components. More specifically, it was structured into distinct sections beginning with questions about the interviewee's role and background within the company. Subsequent sections contain questions that align and relate to specific elements of the framework to ensure a clear connection between theory and practice. For example, questions are designed to address the dynamics of the actual exchange process and the perspectives of a sender and receiver of knowledge. These predetermined topics allow for exploring various areas, enabling a thorough examination encompassing multiple dimensions of the research question, such as differences, enablers, and barriers to knowledge transfer. At the same time, the flexibility creates an opportunity to discover unexpected insights applicable to the focus area (Bell et al., 2019). Moreover, the questions were carefully structured to encourage interviewees to reflect on past experiences in various research and development projects. Drawing on real-life examples and discussing past projects helps attain deeper insights and minimize the risk of receiving abstract or hypothetical responses. This ensured the data is grounded in practical experiences rather than theoretical assumptions.

In addition, the interviewers aimed to avoid asking leading questions and vary the kinds of questions per Kvale's (1996) suggestions, as referred to in Bell et al. (2019). In a conference room, or through online meeting tools, we allowed the respondents to express themselves vividly in their faculty terms. All required considerations were then appraised to ensure a good interview practice. At the initial point of contact, the respondents were briefed and introduced to the subject, without being too specific, before the scheduled interview. This was done to enable preparation while avoiding the introduction of biases. Each interviewee's importance was highlighted while being briefed about the confidentiality and research purposes of the study. Before the interview, an introduction was provided to establish rapport and create an atmosphere where the participant is encouraged to provide thoughtful answers. The interviewees will be further explored below in section 3.3.2.1.

Sampling

The company identified and proposed suitable respondents based on predefined criteria, selecting individuals holding one of three key roles within the division: Senior Technical Leader (STL), Technical Leader (TL), or Technical Expert (TE). This approach reflected a form of convenience sampling. While such sampling may introduce potential bias (Lohr, 2022), it also enabled access to highly relevant and knowledgeable participants, as the

selection was made thoughtfully by the case company. All selected were considered key actors in the study, as they possess unique knowledge and are actively engaged in knowledge transfers, either by sharing expertise or learning from others. Allowing the company to propose respondents offered key advantages. First, it increased the likelihood of individuals actively involved in current knowledge transfer efforts, ongoing research activities, or recent organizational changes. Second, it helped secure support and legitimacy for the study. This likely enhances participation rates and reduces barriers to open and reflective dialogue, as respondents may have felt encouraged to share their views honestly within the scope of an internally endorsed initiative. In addition, to establish a foundation for a comparative study, several individuals from each research division have been interviewed.

The two divisions examined differ in several ways. Division A holds a nearly century-long track record of successful research and deeply established expertise. Division B has gone through major changes following a shift in strategic focus and is involved in navigating the ongoing transformation within the industry, while growing substantially in employees over the last decades. Although the two differ fundamentally in their engineering nature and organizational priorities, they both serve in the same company to share built knowledge in the organization. Division B is, moreover, inherently technical and revolves around the technical domain, requiring deep expertise, and is characterized by quantitative problem-solving. Meanwhile, Division A is centered around a certain characteristic or attribute and not a stand-alone technology. Nevertheless, both divisions play a strategically important role in the organization's future and therefore serve as suitable groups to examine due to their severely different characteristics.

Table 3 provides an overview of the respondents' roles, divisions, the date for the interview, and its length. Eight employees within the case company were interviewed, excluding the two pilot interviews. The respondent representation from the two divisions was weighted to reflect the relative size of each division. All respondents are experts within their niche, entrusted with the responsibility of developing or disseminating technical knowledge either within their respective teams or divisions. Specifically, the roles are distinguished in the following way: Technical Experts (TE) focus primarily on advancing their technical expertise and contribute to the organization through knowledge development. Technical Leaders (TL) build and manage the development and application of knowledge within their respective teams. Senior Technical Leaders (STL) operate at an inter-divisional level, spanning over multiple teams to be at the forefront in the industry. The dispersion of roles provides deeper insight into how knowledge is shared and assimilated at the innovation-generating instances within the organization. This distribution, in turn, allows the study to capture the dynamics of knowledge flow, transfer, and management within the divisions, thereby enabling a more comprehensive and in-depth analysis.

Table 4 - Overview of Respondents

Respondent	Role	Division	Date	Length
R1	TL	Division B	2025-03-28	61 min
R2	TE	Division B	2025-04-03	51 min
R3	STL	Division A	2025-04-06	64 min
R4	STL	Division B	2025-04-06	60 min
R5	TL	Division B	2025-04-06	61 min
R6	STL	Division A	2025-04-09	76 min
R7	TL	Division B	2025-04-09	52 min
R8	TE	Division A	2025-04-09	52 min

All interviews except one were conducted in the respondents' native language, Swedish. The exception was in the company's assigned language, English. To preserve confidentiality, respondents are identified as 'R' and a unique number throughout the following chapters of this study.

The number of respondents in this study was guided by the principle of theoretical saturation, where data collection continues until no new significant insights emerge, a process aligned with Charmaz (2014). Despite some variation in individual responses, theoretical saturation was considered to have been reached at the divisional level following our eight interviews. This judgment was based on the observation that the later interviews began to reinforce previously identified factors, rather than introducing novel perspectives. Reaching saturation suggests that the data collected was sufficient to comprehensively capture the existing enablers and barriers to knowledge transfer within each division, thus supporting the validity and depth of our thematic analysis.

3.4 Data Analysis

The conducted interviews were immediately transcribed to enable a written overview for further analysis. The transcription aimed to ease the navigation of the material in text format rather than repeatedly listening to the recordings. Consequently, the subsequent analysis should be more thorough, as the words are emphasized rather than influenced by the respondent's tone or attitude, which could impact the analyst's conclusions. To ensure no important discussion was overlooked in the analysis, the expedited transcription was verified against the original recording. This approach ensures the efficient production of transcripts and their full alignment with the interview content.

To analyze the interviews, we applied thematic analysis using coding that organizes the transcribed data by identifying themes and patterns. This flexible approach enables a rich and detailed yet systematic approach to identifying patterns in the data (Nowell et al., 2017). More specifically, we adopted the Gioia method for a systematic and structured approach. The method entails data refinement in multiple stages, beginning with the raw transcribed text, then categorizing to first-order codes, second-order categories, and finally, higher-level aggregate themes (Gioia, 2021).

The process began by examining the transcribed interviews to identify quotes relevant to our research question. Moreover, the coding follows what Bell et al. (2019, p. 595) call 'steps and considerations in coding,' thus starting with a read-through of the transcripts, reviews, and note-making. To reduce individual bias, we conducted the initial first-order coding independently. We coded the transcripts based on our interpretation of significant statements. Thereafter, we met to discuss and compare our respective codes. Overlapping first-order codes were refined or merged before identifying relevant second-order categories through this collaboration.

To illustrate our coding process more concretely, we offer the following example from our dataset. During the initial phase, we identified the quote: *"It is more about feeling that there is a give and take. If you end up in a situation where you feel that someone is only trying to take advantage of you, you tend to avoid them when you see them in the corridor."* This quote was initially highlighted for its clear articulation of a relational dynamic that influences knowledge transfer behavior. We coded this quote as: *Reluctance to engage with others due to lack of reciprocity*. It captures the emotional response (avoidance) and underlying reasoning (perceived imbalance in give-and-take). As part of our thematic analysis, this code later contributed to developing a broader second-order category with four other codes, namely, self-serving behavior.

Finally, we synthesize the second-order categories to higher-level aggregate themes to form a cohesive understanding of the participants' experiences and feelings. The overarching approach allows us to identify and map the broader or more formal themes that reflect key findings concerning the study's research question. Throughout the process, constant reviewing and redoing also ensured diverse analysis perspectives. As thematic analysis can be very time-consuming, we applied and used the qualitative data analysis tool NVivo. The software aided our process in categorizing and analyzing the interview transcripts in line with the Gioia method. The program speeds up our analysis process and enhances accuracy, efficiency, and reproducibility. Moreover, it organizes the data in a structured way, making the results more accessible and easier to interpret.

Undoubtedly, thematic analysis has the potential to be strongly beneficial in qualitative research, particularly when handling larger sets of data. In sum, it simplifies the process and helps extract meaningful insights. Although not eliminating it, thematic analysis reduces bias (Gioia, 2021). Nevertheless, some of the method's drawbacks are worth mentioning. The time required to interpret data multiple times is substantial, even when supported by digital tools.

Furthermore, as broad categorizations are made, we might experience a loss of nuanced perspectives or insights. The final aggregated themes could thus be seen as overly simplified, making the research lack depth. Despite its limitations, it is a valuable tool for the current study. Integrating our findings from the thematic analysis with the literature review will strengthen the overall analysis, allowing for a deeper understanding of the research's significance and potential implications for theory, practice, and future research.

3.5 Research Quality

To ensure high quality of conducted research, the steps and considerations discussed in the mentioned literature, throughout section 3, have been carefully followed. A qualitative study possessing a high quality is signified by the following characteristics: dependability, credibility, transferability, and confirmability.

To ensure high dependability, this paper has, in previous subheadings, provided details of our research methodology, covering all main aspects of research strategy, design, and data collection process. A well-designed semi-structured interview guide reflects a systematic approach to data collection while maintaining the flexibility to accommodate diverse responses (Creswell & Plano Clark, 2017). In our guide, we organized the questions into distinct areas. For example, one section explores the interviewees' experiences as senders of knowledge, while another focuses on their roles as receivers. This structure ensures that we address all relevant dimensions necessary to capture the full scope of our research, without overly constraining the conversation within each area. Dependability was further achieved through scheduled meetings or audits with a supervisor and other university students. Moreover, we have had continuous meetings with our supervisors at the case company throughout the research process. As outside reviewers, they ensured that the study followed appropriate research standards and covered all appropriate phases.

Secondly, credibility is the degree to which the researcher's results are accurate and reliable (Bell et al., 2019). In the current study, validity was enhanced by the semi-structured nature of our interviews, which enabled in-depth exploration of respondents' perspectives. Additionally, the researchers engaged in reflexive practices by discussing with peers and reflecting on adjusting the interview technique as interviews were held to maintain a balanced and objective approach. Finally, two pilot interviews were used to strengthen the credibility further, as the researchers identified which questions were more suited to address the research question. To ensure the data accurately reflects the topic, the pilot interviews also identified which interview techniques best facilitate meaningful and relevant responses.

Thirdly, transferability is the extent to which the research can be applied to other contexts, such as differing organizations or industries. As stated previously, the qualitative process is inherently affected by researchers' subjectivity, a well-known critique of the qualitative approach (Bell et al., 2019). Therefore, rich and thick descriptions were provided to the reader to enable a basis for judgment of transferability. Each case in the comparative nature

of the design was described in detail to give the reader substantial information on the organization and the environment in which it operates. This includes, among others, the settings, sampling strategy, and participants. Furthermore, the study incorporates a thorough and useful theoretical framework relevant to the research question to add additional transferability.

Lastly, confirmability is defined as the researcher presenting an objective description of a social phenomenon, according to Bell et al. (2019). To minimize bias, the researchers were focused on keeping an open mind and listening to different perspectives, mainly through supervision and discussion with university peers. Nevertheless, full objectivity is neither possible nor expected in qualitative research (Bell et al., 2019). Although believed to provide rich insights into an underexplored field, the research is not intended to provide a complete representation of reality. Rather, it showcases the truth in the specific context in which the research is conducted; that is, within the specific research division of the company. Other divisions within the same organization may thus function differently.

3.6 Ethical Considerations

Since the primary data for this study was collected through semi-structured interviews, adherence to research ethics was of utmost priority (Bell et al., 2019). Participants were informed about the study's purpose, the voluntary nature of their participation, and the confidentiality of their responses. As stated in section 3.3.2, participant privacy and data integrity were upheld and ensured by anonymization. Throughout the study, the collaborating company is referred to as the case company, with the names of the two research divisions anonymized as Division A and Division B. Further, respondents have been assigned unique identification codes to ensure confidentiality. This approach not only upholds the independence of the participants but also reinforces the research credibility and ethical integrity of the research.

While the methodology provides a critical foundation for the study, the following section will delve into the interview findings from the respondents to further explore how existing enablers and barriers influence knowledge transfer practices across two research divisions at an automotive manufacturing firm.

4. Findings

The following section delves into the findings from both divisions, where each division is presented in isolation. Division A is examined first, focusing on its knowledge transfer processes and the corresponding enablers and barriers that influence knowledge transfer. This is followed by a presentation of findings for Division B with similar subsections. To reflect the divisional context outlined in Figure 1, the initial subsection of the two divisions will include a brief overview of relevant findings beyond the research question, providing necessary contextual background. Moreover, each subsection after the contextual environment is named after an assignable theme derived from the thematic analysis. Additionally, we introduce and immerse ourselves in assignable second-order categories and selected first-order codes. Finally, key differences and commonalities between the divisions are outlined before our findings are discussed.

4.1 Findings of Division A

The following subsection will initially present the findings relating to the divisional context, enabling an expanded understanding of subsequent sections assigned to the scope of the research. Moreover, in interviews with the three respondents from Division A, three overarching themes were identified in the thematic analysis: *Depth of Interaction Shaping Knowledge Exchange, Divisional Frictions Undermining Knowledge Transfer,* and *People- and Purpose-Centered Enablers to Knowledge Sharing.* Each of these themes will be further explored below.

4.1.1 Contextual Environment Division A

Division A is characterized by a nearly century-long track record of successful research and deeply established expertise. The research-focused heritage has been managed for more than half a century, built on the foundational guidelines set early on. Respondent six emphasizes this by explaining that they still work with guidelines established in the middle of the 20th century. Their long-standing identity is rooted in historical practices and perspectives that continue to shape the division's approach to knowledge today. Respondent six further explains that their heritage is something they actively seek to guard as it is a core attribute of the division and reflects what the case company stands for. They also highlight Division A's long-standing involvement in research initiatives, an area other divisions have only begun to explore over the past 10 to 15 years, underscoring Division A's deeper experience.

The division is, furthermore, centered around a certain attribute and not a stand-alone technology, and is therefore required to work more cross-divisionally over the organization. Group members need to be involved in product launches or other activities to ensure that the attribute is incorporated. Hence, there is a greater focus on transferring the knowledge built within and across the division. Respondent three elaborates on this, referring to the division as an "unofficial communication hub".

The findings above indicate the strategic importance of the division in the organization's future. Division A seems to be working with and leveraging its history of being research-focused to share knowledge throughout the company. More than a conventional R&D unit, Division A bridges specialized research with broader product and innovation processes.

4.1.2 Depth of Interaction Shaping Knowledge Exchange

The thematic analysis for Division A's knowledge exchange process is presented in Table 5. The overarching theme, depth of interaction shaping knowledge exchange, emerged from the analysis and is supported by the second-order categories discussed below.

Table 5 - Exchange Process Division A

First-Order Codes	Second-Order Categories	Aggregated Theme
Communicating ongoing developments, not only final results Sharing knowledge through different communication tools Formalized process to document explicit knowledge Sharing divisional heritage through internal courses Guidelines and methodological approaches Presenting Summarized Material	Stand-alone processes focusing on one-way communication	Depth of interaction shaping knowledge exchange
Creating spaces for knowledge exchange by invitation Organized brainstorming sessions Several and recurring meetings	Intentional interactive collaboration	
Spontaneous collaborations due to small teams Sequential conversations by a chain of informal interactions Talking about work during lunch	Informal and emergent communication	

Signified by a multi-faceted approach, knowledge transfer in Division A occurs through stand-alone processes focusing on one-way communication, intentional interactive collaboration, and more informal and emergent communication. While communication tools such as Teams and SharePoint facilitate a critical network structure, explicit knowledge sharing also occurs through documented educational material to raise the general knowledge level. Division A further has multiple guidelines set for the functionalities of the attribute as the main characteristic of the division. These are based on historical research methodology and are set to serve as a supporting structure for the employees within the group. Explicit knowledge sharing can additionally occur through sharing important gained external knowledge, mainly through email conversations or presentations.

"I attend many external meetings where I summarize and share the information with my colleagues. One example is when I have attended a conference, I usually write a summary. Then I invite people and give a short, rapid-fire presentation to highlight key points. I try to target topics or specific insights I picked up." - R8

Respondent eight further explains that they adjust their summations with one bullet point summary and one extensive summary to give the receiver a more or less extensive summary of the external knowledge gathered. Moreover, recurring meetings are necessary to control set projections from a managerial level, thus serving as groundwork, facilitating daily knowledge sharing among the members. To ask questions or delve into a specific field of knowledge, division members invite one another to meetings or engage in structured brainstorming sessions to iteratively explore something together. These constitute some of the structured processes that Division A utilizes to facilitate knowledge transfer.

"We have structured processes for everything. However, there are not many of us, which makes collaboration spontaneous in a controlled way. If we were more people, we would need more structured processes to learn from each other. " - R6

The spontaneous collaboration, or informal and emergent communication, is rather significant for the division as the size of the teams allows for increased spontaneity, where knowledge transfer can occur through informal meetings before the start of the day or in the lunchroom.

"One should not underestimate lunch. It is actually quite nice here, many people bring their food and sit down together, and many times, conversations naturally lead to a work-related discussion" - R8

Additionally, division members note that knowledge sharing occurs iteratively through project progressions. As projects progress, the frequency of communication increases stagewise, allowing for knowledge sharing with tacit and explicit elements throughout.

"We meet and talk with our colleagues. That knowledge is documented internally through meetings, I would say. Above all, it is about presenting what you have done, discussing the content along the way, and not just focusing on the end result, especially in these long-term external research projects that span several years" - R8

An example of an iterative session where knowledge is exchanged and establishes ground for knowledge creation is what respondent three refers to as whiteboarding. The agents involved iteratively brainstorm with the support of a whiteboard to solve problems. This could therefore be considered an 'organized brainstorming session' where knowledge transfer occurs between the sender and receiver.

"I spend much of my days doing what I call whiteboarding, sitting and drawing on a whiteboard. The most common work-related question I get is, 'Are you in the office and do you have five minutes to spare?' (...) Part of the pedagogical skill is being able to facilitate that kind of whiteboard conversation. Just as often as I contribute something, it's about helping them work through their own thoughts." - R3

The findings related to Division A's knowledge exchange processes indicate that their way of sharing knowledge is characterized by a multi-faceted approach where the depth of interaction shapes the knowledge exchange. While several modes of exchange exist within the division, they differ in their capacity to foster a meaningful knowledge transfer. At one end of the spectrum lie the one-way communication formats of stand-alone processes. Although they serve as important prerequisites by making knowledge accessible or raising awareness, they typically involve limited interaction and, as such, offer little depth. In contrast, intentional and interactive collaborations, as well as informal and emergent communication, involve at least two actively engaged participants, thereby offering greater depth from the outset. This depth facilitates a smoother exchange by aligning perspectives and building stronger personal ties between members in the division.

4.1.3 Divisional Frictions Undermining Knowledge Transfer

The knowledge transfer barriers for Division A are characterized by divisional frictions that undermine a continuous knowledge transfer, illustrated in Table 6. The second-order categories encapsulate these frictions through five broad characteristics: protectionism, comfort, rigidity, time pressures, and the implications of remote work. Initially, political games and control over knowledge stems from protectionism, where the individual wants to protect gained knowledge, either with the intention to gain an information advantage or due to fear of losing ownership.

"There are always people who are comfortable having an information advantage and those who prefer to let information trickle out in exchange for work done, but that is a certain personality type" - R3

Furthermore, one respondent expressed that some specialists in the organization are keen on maintaining control within their domain, thus reducing the possibility of transferring knowledge to other organizational members. The unwillingness to collaborate or adapt complicates the exchange process.

"There are those who believe they should remain specialists within their domain and that others should adapt to them. But things do not go as well if you do not genuinely try to find common ground. How can I explain what I do in a way that makes you intuitively feel that you might need to adjust your role slightly?" - R3

Table 6 - Barriers Division A

First-Order Codes	Second-Order Categories	Aggregated Theme
A desire to have an information advantage over others	Political games and control over knowledge	Divisional frictions undermining knowledge transfer
Wanting control over your own research domain		
Withholding information due to fear of losing ownership and control		
Comfort in working with people you know	Relational comfort limiting collaboration	
Unwillingness to work toward a similar goal		
A low number of demonstrations of researchers' result	Rigid structures and time pressures	
Inability to work on certain projects due to role definition		
A distant organization creating challenges of building relationships company-wide		
Team structures constraining knowledge sharing across the division		
Lack of time due to prioritized activities		
Ineffective communication through online tools	Real-time interaction prioritized over digital communication	
Live participation is valued more than offline involvement		

Secondly, some respondents witness rigid structures causing time pressures and consequently an inability to pursue more desired activities. Respondent three explains that they experience, because of full schedules, that time is a scarce resource, constraining knowledge sharing.

"The willingness is definitely there for many, but it's very difficult for most to find the time for it. That is by far the biggest problem." - R3

Additionally, respondents further experience feeling constrained by their role definition, where organizational objectives lead to prioritizing activities that take time. Less senior respondents are, in part, unable to conduct desired research and rather lean into divisional objectives.

"You constantly have to prove and justify things. We need to do this to accomplish our objectives, but at the same time, we are told that there is a fire elsewhere that needs to be prioritized" - R8

On the contrary, on a more senior level, the approach to prioritization appears to differ.

"We are one of the best research environments, at least in western Sweden. That is because we do not have strict deadlines. It is not about having something finished by next week, it is the answer to questions that matters. If I need funding, I just say, 'Hi boss, I need money for this', and then he asks, 'Does it fit into a project? Do we need to calculate this?' If so, great. Then we get the funding and resources" - R3

This exemplifies the observed constraints by the different role descriptions, where time may or may not be of importance depending on the context and situation.

The divisional structure, or way of working, within Division A has become more structured lately, which is believed to affect the knowledge sharing negatively. Respondent eight states that the rigid structure the division currently operates in constrains sharing, as meetings and the opportunity to access knowledge are restricted to certain group members. In the earlier agile structure, knowledge sharing increased through more frequent result demonstrations. However, this also consumed substantial time that could have been devoted to projects with valuable opportunities for exchange. Mentioned in section 4.1.3, results are still discussed along the way of a project, nevertheless, to a lesser extent than before. In isolation, the reduced degree thus functions as a barrier to knowledge transfer. With that said, identifying a specific structure that facilitates opportunities for knowledge transfer remains a challenge for the division, as advantages and drawbacks will persist regardless of structure.

"In the past, the whole department could take part in the results and discussions, but now things are more closed off between groups. These days, I work more with questions that span several groups. It is more about calling a meeting now. I am the kind of person they might want input from, so I get sent here and there. But back when we had the agile way of working, it was one demo after another. " - R8

Additionally, respondents indicate that it is promoted to share one's ideas at an early stage to prevent tunnel vision and conformity. Without this encouragement or unwillingness to work toward the same goal, there is a risk of becoming comfortable and missing out on opportunities for knowledge transfer that advance the group's knowledge progression. Simultaneously, a sense of relational comfort with familiar colleagues can unintentionally limit knowledge transfer with others in the division.

"You should not allow yourself to go too long without others reviewing your work, not even more than a day, because it is easy to lose your way compared to the rest. No matter how convinced you are that you are on the right track, it does not help if others do not agree" - R3

Lastly, remote work was found to harm the sharing process as participants online were given less attention and thus unable to communicate their knowledge, ideas, or share their inputs. Real-time interaction was prioritized over digital presence in meetings, conversely leaving some knowledge out of the conversation. As live participation was prioritized over offline engagement, the opportunities for an iterative, two-way knowledge transfer through online meetings diminished.

"As long as some participants are physically present, they tend to have a stronger voice in online meetings. It's simply easier to connect in person. It's very difficult to be heard online unless everyone intentionally takes turns and makes space for each voice. If you have two sources and need to prioritize one, you go with the louder one and mute the other. There's almost always a third person online trying to break into a dialogue between two people in the room, but they're not really heard. You have to be significantly more assertive to get your voice across online than you would need to be in a physical room, unless everyone is committed to the same ground rules. In my experience, I've had people literally write in the chat: 'I'm logging off, I can't say what I want to say.'" - R3

The barriers identified above contribute to the broader theme of divisional frictions that hinder knowledge transfer. These frictions stem primarily from characteristics such as protectionism, comfort zones, time constraints, and the challenges of remote work. In the following section, the focus shifts to the enablers that support and facilitate knowledge transfer for Division A.

4.2.4 People- and Purpose-Centered Enablers to Knowledge Sharing

While people- and purpose-centered enablers to knowledge sharing were identified as the aggregated theme for the enablers to knowledge transfer, the second-order categories aggregated into it will be explored further in the subsequent text. The thematic process is depicted in Table 7. All respondents were keen on sharing a positive outlook on their ability to share and engage in knowledge sharing within Division A.

Table 7 - Enablers Division A

First-Order Codes	Second-Order Categories	Aggregated Theme
Finding a common goal in order to facilitate collaboration Communication increases over time depending on research stage Critical mass providing new perspectives to group Emphasizing the need to fill a knowledge gap	Purpose-driven communication to highlight importance	People- and purpose-centered enablers to knowledge sharing
Feeling enjoyment in sharing knowledge Seeking knowledge through people you know and enjoy working with Building strong personal relationships that foster trust over time Curious to understand how other people think Being thankful and appreciating the knowledge around you, wanting to learn more Maintaining curiosity to broaden your intellectual perspective	Motivational drivers to share or receive knowledge	
Importance of mutual respect and interaction in communication Noticing each other and allowing an open conversation An open climate fostering collaboration A forgiving and welcoming environment A safe space where vulnerability is welcomed and free from judgment Encouraging other when they perform well Ensuring people get recognition from their work Ensuring everyone is included in patent generation	An open and inclusive divisional culture	
Closeness to other colleagues enabling new conversations in the office Marketing oneself to create awareness of your expertise Showing people where to find relevant knowledge Spending time building an intra company network	Social capital positioning	
Being aware that other people can be right Adjusting your way to communicate depending on the receiver Filtering the information buzz and understanding the main contents despite prejudice	Awareness and adaptation in communication	

The first second-order category, purpose-driven communication to highlight importance, is composed of elements relating to project-related collaboration. In a collaborative interaction, there is a need for a critical mass to question opinions in discussions and reasoning to ensure that the underlying thought process corresponds to the intended outcome. Thus, critical skepticism enables knowledge transfer as it seeks to reach common grounds and a common understanding among the members.

"You need some form of critique. You need to have the right expertise in place so that you have a critical mass." - R8

An intention to seek common grounds and goals enables the transfer from the sender to the receiver. The need for increased communication grows over time, depending on the project's research stage. One respondent highlights the importance of reaching consensus on objectives as the initiator of the collaboration. As the project approaches finalization, communication and the entailed knowledge transfer become more intensive. Moreover, while common goals serve as a key mechanism of knowledge transfer, the second-order category, an open and inclusive divisional culture, functions as an enabler leading to common goals, as mentioned by respondent three.

"People are motivated, everyone loves [attribute]. Many have chosen [case company] because it is a [attribute] brand" - R3

Conversely, this creates a culture where people chase the same overarching objectives. All respondents in Division A emphasize the inclusive culture, where vulnerability and respect are promoted. Respondent eight states that the climate fosters vulnerability, allowing individuals to learn from mistakes and facilitating the transfer of knowledge from both successful and unsuccessful problem-solving attempts. Respondent six additionally explains how encouraging accomplishments creates a supportive environment of recognition and inclusion, leading to innovation, implicitly facilitating increased knowledge sharing among colleagues. They further explain that the members in the division are good at recognizing each other's contributions. The forgiving environment creates a mutual respect, creating room for informal and emergent interactions.

"This sense that you can show your vulnerable side to one another. No one judges you, instead, they try to help. And everyone learns something. You learn from a mistake, too, even if things go wrong." -R8

A further example of the division's open and inclusive culture comes from a respondent who explains that a patenting session created initial friction in the group, prompting them to ensure that all relevant parties are included in future patent generation sessions. When everyone feels involved and acknowledged, knowledge transfer efforts are made more consistently.

Another second-order category of enablers to knowledge transfer for Division A is motivational drivers to share or receive knowledge. The willingness to seek or share knowledge is essential as it facilitates the engagement of the parties involved in the knowledge transfer, which includes the sender and receiver of knowledge. To expand one's knowledge base, an individual is naturally required to be willing to engage and seek new knowledge. Respondent eight described their experience upon joining the case company and how they engaged in acquiring and sharing knowledge, highlighting active willingness and curiosity as critical enablers.

"I tried to draw out as much knowledge as I could from others while offering what I had to contribute." -R8

Simultaneously, the willingness to share is a cornerstone of iterative knowledge transfer. While individuals may be open to seeking knowledge, a reluctance to share from the sender impedes the exchange process, and the transfer of knowledge fails to occur. Trust can therefore function as a mutually reinforcing motivational driver, where repeated interactions over time establish trust, ultimately fostering a greater willingness to share as the individual's trust in the ability of the receiver to preserve the knowledge.

"A rotation of the workforce is quite an effective way to build relationships and work together. In doing so, you establish a certain level of trust." - R8

All codes relating to willingness function as overarching enablers to the other motivational drivers. To achieve a certain willingness, curiosity stands out as a strong motivational driver. This curiosity stems from an overall interest in people and understanding others. Respondent eight further explains that the more one knows, the more one realizes how much they don't know, fostering humility.

"You need to give it a chance to truly hear what they are actually thinking about, even if they express it in a way that clashes strongly with your own worldview." - R3

The second-order category of social capital positioning relates to an individual's social surroundings. The respondents in Division A state that the opportunity to integrate with different members in the division through different teams allows them to share knowledge beyond the daily activities and make new connections to more distant colleagues. As a result, individuals can showcase their expertise to others, establishing common ground for future knowledge sharing. Regardless of position, one needs to market and share their knowledge. However, experienced members focus more on marketing themselves to create awareness of their expertise and less on building a network. The opposite is true for less senior members.

"It was quite exciting when I arrived here seven years ago, as I didn't have any network here. So, I spent a lot of time during the first six months building a network (...) So I was around and talked to many different people in different areas and divisions." - R8

Positioning one's social capital works as a further enabler as it creates new conversations and subsequently an opportunity for the transfer of knowledge.

"When I go to speak with colleagues, someone else might show up as well. I feel that I have a lot of very good conversations... At that time (in the morning), there are not too many meetings. If you start talking with someone you have frequent discussions with, one or two of their colleagues might join. Then they get involved in the conversation, and you begin to understand what that person is working on." - R8

Finally, the second-order category awareness and adaptation in communication gather codes relating to the respondents' ability to adjust their communication depending on the receiver. Theoretically called one's dissemination capacity, respondent three emphasizes that understanding the receiver is essential.

"It is about putting yourself in someone else's shoes(...) It is just as much an analysis of the receiver as of the problem itself(...) You need to gain some understanding of the other person's way, or ways, of interpreting the world." - R3

Employees further stress the need to recognize that others may also be right and the ability to filter outside noise, setting aside prejudice to capture the key intentions.

"You need to give it a chance to truly hear what they are actually thinking of, even if they express it in a way that strongly clashes with your worldview. It is a continuous exercise in humility and open-mindedness (...) if you do not listen, you cannot provide a meaningful response." - R3

To conclude, the aggregated theme of people- and purpose-centered enablers to knowledge transfer grasps the relational dimension emphasized by respondents. The second-order categories discussed above form the foundation enabling knowledge transfer in Division A.

4.2 Findings of Division B

Similar to 4.1, we have identified three aggregated themes for Division B: *Interaction-Based vs Stand-Alone Knowledge Exchange, Fragmentation of Knowledge Transfer Through Structural and Behavioral Barriers,* and *Knowledge Transfer as Iterative Processes with Strategic Purpose*. The findings of each theme and mechanism will be presented below, but first, the contextual environment of Division B will be examined to contextualize our divisional findings.

4.2.1 Contextual Environment Division B

Division B is inherently technical and revolves around the technical domain, requiring deep expertise, characterized by quantitative problem solving. The division has undergone drastic change through a shift in technological focus and is involved in navigating the ongoing transformation within the industry. Adding to this, the division has substantially grown in employees over the last decades. Respondent seven emphasized the exponential growth in employees in their group. When they started 16 years ago, only two individuals worked in their specific field. Today, there are approximately 500 employees in the same field, highlighting the substantial growth in recent years.

The division's expansion is rooted in its increasingly strategically important role in the organization's future. As the automotive industry undergoes rapid transformation, Division B must remain highly adaptive and responsive to external pressures, such as market shifts, technological advancements, and cost optimization. The division is centered and closely involved in the company's core process, which is evident in the emphasized nature of conducted research. Respondent five states that all business areas are quite dynamic. One cannot just repeat outdated material, but needs to constantly stay up to date with what has happened. This highlights the focus on the mentioned adaptability to evolving markets and internal needs in the company. Respondent seven reinforces this point, arguing that research cannot be too far off in the future, but rather, more hands-on. Additionally, respondent seven explained that everything is under extreme cost focus while also needing to be produced at high speed.

The contextual findings concerning Division B indicate that the group must be highly adaptable while maintaining a strong focus on cost-efficiency to meet the evolving market demand, highlighting the group's strategic importance within a rapidly changing market landscape. Consequently, these findings may suggest that Division B operates closer to the market compared to Division A. The division's research is often closely tied to implementation timelines and cost-efficiency requirements. This proximity to real-time production further stresses the need for effective and timely knowledge transfer practices. In the following subsection, the findings relating to the knowledge exchange processes of Division B will be presented.

4.2.2 Interaction-Based vs Stand-Alone Knowledge Exchange

The thematic analysis conducted for the exchange process of Division B is displayed in Table 8. While the aggregated theme provides some insight into the overarching patterns of the division, the second-order categories will be explored further. The knowledge transfer exchange process for Division B is characterized by both interaction-based and stand-alone processes. The interaction-based processes are dependent on two or more participants, whereas stand-alone processes can be performed without any interaction from other people.

Table 8 - Exchange Process Division B

First-Order Codes	Second-Order Categories	Aggregated Theme
Gathering people in a brainstorming session to raise different opinions	Interactive and collaborative activities	Interaction-based vs stand-alone knowledge exchange
Continuous collaboration to ensure knowledge implementation		
Reverse engineering tasks creating a platform for discussion		
Inviting colleagues to receive input		
Mentorship to enhance learning curve		
Recurring meetings to follow project progressions and ensuring participation		
Use of different communication tools to spread knowledge	Stand-alone processes	
Documenting explicit knowledge in the form of education material		
Holding a presentation that explains problem-solving measures		
Documenting projects through different systems		

Throughout the interviews, respondents from Division B shed light on the importance of recurring meetings to facilitate opportunities for knowledge transfer and increasing employee involvement. Regularly scheduled meetings were described as key to ensuring that employees have a forum to engage in discussions and learn.

"People need to be involved and understand what's going on. An important part of that is having some kind of regular meeting structure. We discuss and inform each other about what's happening, so that everyone feels a bit involved." - R4

However, some question the effectiveness of these meetings and believe they lack depth to adequately transfer knowledge.

"There are an awful lot of meetings and forums and so on, where the same things are rehashed over and over again. But if you ask me whether I think all of them are effective and achieve their purpose, I would probably say no. They're often very controlled, and it's very rare that any kind of in-depth discussion takes place." - R5

Furthermore, when employees in Division B lack adequate knowledge in a certain area, they often create spaces for knowledge transfer to occur by inviting other employees who hold relevant knowledge. Respondent two emphasizes the ease of booking a meeting to ask for input on a problem. This process involves collaborative co-working sessions or organized brainstorming sessions with the intention of accessing the needed knowledge.

"Sometimes we have meetings in which people from other teams or people from our team sit together to give opinions on a problem, like a brainstorming session. Usually, someone organizes this brainstorming session." - R2

Intending to access needed knowledge, respondents from Division B also highlight how they work with reverse engineering in collaborative settings. When working together, the members of the team have to use their knowledge to understand a given product. Hence, in these settings, knowledge could either be transferred from the original creators of the product or between the employees working together to find a solution.

"So we buy the [competitive product], and what we need to do then is understand the [product] in order to know how to use it. In practice, that means we do a lot of testing together." - R7

Mentorship emerged as a key process for knowledge transfer, where a respondent highlights coaching and development to directly transfer knowledge. There is an understanding that the complex environment of the division requires substantial learning time, and respondent seven highlights that everyone is assigned a mentor when hired. Thus, through a collaborative mentoring relationship, knowledge is tailored to fit the mentee's needs. This process was emphasized to be particularly valuable for building long-term competence.

"I work a lot with mentorship, so I have different people whom I coach and develop, and to whom I transfer knowledge directly. I have one person who might take over in about three years and step into my role instead." - R5

As a stand-alone process, employees identify documentation as an important measure to store knowledge in the organization and make it accessible to others over time.

"It is extremely important that we document everything we do. And we have plenty of systems in place to ensure thorough documentation." - R7

At the same time, challenges and limitations related to knowledge documentation were also brought forward. Some respondents questioned its long-term usefulness and ability to capture the full complexity of different work practices.

"A written report is the standard method for preserving knowledge in organizations (...). However, it becomes outdated within a quarter. And for the person writing the report, it has already become outdated after about six months. Moreover, there is so much that cannot be captured in a report." - R5

Employees also highlight the importance of gathering information and sharing it through different communication tools, such as emails or presentations, to complement documentation. These methods are often carried out by individuals without direct interaction or feedback from other employees, and commonly involve conveying specific insights or solutions to particular problems.

"I try to prepare some documents or presentations explaining the problem and how we have solved it, and then I go to a meeting with the team and present my findings to them. Or I write an email, I send it to my colleagues and explain that okay, I learned about this and this is important for us due to these reasons." - R2

These insights collectively underscore that the exchange process in Division B is facilitated through a mix of structured meetings, collaboration, and documentation. The contrast between stand-alone processes like email communication and interactive activities like brainstorming illustrates the division's effort to balance efficiency with depth in its knowledge exchange processes.

A notable distinction emerges between stand-alone processes and more interactive, collaborative settings. While documentation and presentations serve important roles in preserving and distributing knowledge efficiently, they often lack feedback loops and the contextual richness required to transfer complex knowledge. In contrast, interactive discussion, through, for example, brainstorming, offers opportunities for clarification and sense-making. Interestingly, mentorship and reverse engineering emerged as two key processes within the division.

4.2.3 Fragmentation of Knowledge Transfer Through Structural and Behavioral Barriers

The barriers to knowledge transfer of Division B are found to be affected by structural and behavioral patterns, fragmenting the knowledge transfer process. The first-order codes and second-order categories that form the basis for this analysis are summarized in Table 9, culminating in the aggregated theme that captures the overarching patterns of fragmentation. The following sections will explore these findings in greater depth, unpacking how they are evident in practice and the implications they carry for Division B's members.

Among the barriers to transfer knowledge identified, self-serving behavior emerged as a second-order category. Within this category, a barrier expressed by participants was a reluctance to engage with others due to a lack of reciprocity. The lack of perceived mutual benefit often led to disengagement, or even full avoidance.

"It is more about feeling that there is a give and take. If you end up in a situation where you feel that someone is only trying to take advantage of you, you tend to avoid them when you see them in the corridor."- R5

Respondents further acknowledge that employees can easily become accustomed to their way of working and thus prioritize self-interest over sharing information. Individuals do not actively seek out opportunities for knowledge transfer. While some describe this as a matter of comfort, others identify it as an active form of protectionism. Lack of interest reduces the curiosity to seek new knowledge, and high workloads and stress further reinforce this

behavior, leading individuals to protect themselves and limit their engagement in knowledge transfer activities.

"It is easy to become comfortable with what you have, and you might not have the time or interest, but there are certainly synergies to be gained that are not being utilized today." - R1

Another explanation may be time pressure, causing high workload and stress. This creates a need to prioritize what knowledge should be absorbed and from whom. As a result, individuals may attempt to protect themselves from information overload and excessive work demands.

"I also believe that, in many cases, many people today have a high workload and stress. This also means that when you are stressed, you tend to put up blinders or walls to protect yourself." - R5

Findings also point to dynamics of career progression, where respondents indicate that knowledge can be withheld to maintain personal advantage. In part, this was described to correspond to a broader cultural pattern where individuals, often more ambitious and assertive, were keen to advance their visibility.

"Generally speaking, I still feel that there is a 'male culture' that allows people to operate behind the scenes and lift individuals who may be good at asserting themselves, possibly withholding information, stepping on others, and aiming to advance in their careers." - R7

Concerning the inflexible time structure, respondents indicate, among other things, that prioritizing certain activities or projects limits employees' opportunities to engage in knowledge transfers. Adherence to daily tasks or deliverables left little room for spontaneous knowledge transfers, as they are more measurable or immediate in actual output. Respondent three explains that upcoming products constantly get the highest priority, creating strict deadlines. Respondent one echoes the strict deadlines, arguing that alternative solutions may not always be considered due to this inflexible time structure.

"There are strict deadlines. That might mean they don't have much time to look at alternative solutions and instead have to follow through with what they've already started. While others have a slightly longer time horizon and are more open to alternative discussions." - R1

Table 9 - Barriers Division B

First-Order Codes	Second-Order Categories	Aggregated Theme
Limited time for 'unnecessary' questions Lack of time due to high workload Not being able to affect time allocation of projects	Inflexible time structure	Fragmentation of knowledge transfer through structural and behavioral barriers
Keeping knowledge from colleagues due to uncertainties Lack of leading-by-doing from managers Keeping knowledge on set hierarchical levels Unspecified role description Cultural differences that imply different viewpoints Perceived gap between native and company-wide language used Employees spread across different buildings, forming silos Trying to identify where knowledge resides	Structural and cultural constraints of the divisional context	
Feeling a risk of collaborating with people you don't know Being too focused on one's niche and not actively listening to others Prejudice that leads to the categorization of other employees Collaboration that depends on having previous experience Becoming comfortable with the knowledge you already possess	Personal impediments and narrow perspectives	
Inconsistent, differing system usage for explicit knowledge Challenges of sorting and structuring knowledge in different systems Irrelevant knowledge not intended for the user Outdated knowledge creates a need for consistent analysis of existing explicit knowledge Inclusion in several teams causing information overflow	Mismanagement of knowledge and information overload	
Reluctance to engage with others due to a lack of reciprocity Limited engagement due to focus on career progression Using manipulation tactics to gain an information advantage Prioritizing self-needs over sharing information	Self-serving behavior	

In addition to the inflexible time structure, respondents identify organizational distance as an evident barrier. Being physically separated from colleagues, such as working in different buildings, limits the opportunities for spontaneous and easily accessible interactions. This inherently affects the natural flow of knowledge transfers.

"Since people are in different buildings, it's always easier to talk to someone who sits nearby. So then you might miss some details that would have been important to consider, but you just didn't think about it. I'm not world-famous either, maybe not everyone even knows that I exist, so to speak." - R1

Additionally, when employees are not co-located and differ in their working methods, efforts to collaborate and exchange knowledge might be met with resistance.

"If you try to collaborate with people and feel that it's not very much welcomed, or they think that your solution is not necessary, or their own way of working is always prioritized, then it is not easy to collaborate with." - R2

Another barrier identified by the respondents relates to knowledge gatekeeping, the act of passively or actively withholding knowledge from others. In some cases, keeping knowledge from others was reinforced by the organizational structure, particularly when hierarchies were perceived as rigid or when knowledge tended to remain concentrated at certain levels.

"We try to work in a way where we do not share all information with the teams, as it can easily become fragmented for them. They should not have to know everything. There are often a lot of back-and-forth discussions when decisions have not been made yet. Things can swing on a weekly basis. When it comes to the flow of information here, or the changes that happen, it can shift on a day-to-day basis. It is very important to protect a team so that it does not receive too much information." - R7

However, this creates a dilemma for the gatekeeper, who must balance recognizing the colleague's importance with the risk of being overwhelmed by excessive information.

"This is one of the things that can be very harmful for an employee, walking around feeling, 'I am not important enough because I am not getting this information', while at the same time not being meant to have too much information. - R7

In relation, a mismanagement of knowledge and information overload are identified as barriers to knowledge transfer. Respondents highlight the considerable number of IT systems in which employees can share, store, and access knowledge. While these systems are set up to facilitate knowledge transfer, their effectiveness is undermined by inconsistent usage patterns. Employees report that different teams or individuals can use these systems divergently, making the information hard to locate. Respondent seven exemplified this by highlighting the numerous versions of a document, while not knowing which one is most up-to-date. Additionally, with a large access to information through different teams, systems, and

formats, respondents experience an overflow of information. Some even mention that they are faced with irrelevant knowledge, which in turn highlights a lack of filtering in knowledge transfer processes.

"It is a jungle with all the systems we have. It is a challenge, a huge challenge, to sort through the information. I think that, depending on which groups you are part of and what you are working on, the need for information varies greatly. Different structures are required to manage it. A lot of time is spent trying to organize and sort everything." - R7

Another challenge intertwined with the mentioned one is the turnover and restructuring of employees. Individuals used to different ways of working could, at times, be more reluctant to adapt to the new group, thus causing inconsistency in system usage.

"It often becomes difficult. The groups grow, and people get replaced. Suddenly, people start creating their systems and no longer follow the old one." - R7

In contrast to structural and cultural constraints of the divisional context, respondents also identify personal impediments and narrow perspectives that can hinder the knowledge transfer process. These are often tied to attitudes, perceptions, and interpersonal dynamics. One frequently mentioned challenge was being too focused on one's expert area, where individuals primarily focus on their tasks and responsibilities rather than being open to a broader organizational knowledge base.

"Every one of us works in a specific area, and we see the problem from our perspective, and we usually see it as the most important thing to solve. And then when someone comes to us, since we are very much focused on our area, we might think that the problem that they are asking for or what they are proposing is not that important."- R2

Moreover, the absence of previous working experience is believed to weaken the motivation to engage in knowledge transfer. Respondents indicate that the lack of a strong relationship or trust between people can entirely disrupt attempts at knowledge transfer. One respondent highlights that people may feel a risk of working with someone they have not worked with before.

"Sometimes it can be easy to keep going back to the same person to talk, especially if you have a good relationship with them, even though you might actually need to involve someone else in the work. That is how it goes when different relationships are in play. You feel that collaboration works better with some than with others. It then becomes easier to delegate to those you work well with, when collaboration is not going as smoothly with others." - R7

Overall, Division B experiences fragmented knowledge transfer due to a combination of structural and behavioral barriers. These obstacles hinder communication and collaboration between knowledge senders and receivers.

4.2.4 Knowledge Transfers as Iterative Processes with Strategic Purpose

For knowledge transfer to occur, certain enabling conditions must be present that support sharing of knowledge across individuals and teams. These enabling conditions are not limited to tools or formal processes, but also encompass cultural, interpersonal, and strategic dimensions that collectively shape how knowledge is transferred. The aggregated theme capturing these enablers for knowledge transfer in Division B is summarized in Table 10, which presents the structure of findings from second-order categories and underlying first-order codes. In the following, we unpack and explore these findings to shed light on the key mechanisms facilitating knowledge sharing within the division.

Respondents strongly emphasize the importance of tailoring communication methods to meet the specific needs of the receiver. Notably, several mention their ability to understand the audience and adapt their messages.

"I have the advantage of being quite adaptable, I can adjust to other people's learning and communication styles. Of course, I have my preferences if I get to choose completely. But it is a strength, because it reduces barriers." - R5

This included adjusting the level of detail and examples used to ensure the knowledge was understandable and relevant to the receiver's background or role. Respondent four highlighted that understanding the counterpart is one of the most important parts, a belief echoed by other respondents.

"I try to spend more time first understanding why they are asking specific questions and then in which best way I can try to give them an answer which could be useful for them." - R2

Respondents further describe taking the time to evaluate and reflect on how to share their knowledge and why and how the receiver would benefit from gaining that specific knowledge. For example, respondent one said that one has to think about how one communicates, adapting to the needs of the audience. This reflective, questioning approach raised the overall awareness of the transfer process, rather than assuming a mutual understanding beforehand, as explained further by respondent five.

"When you say things, you shouldn't just assume that everyone understands it exactly the way you intended. Instead, you need to bring it up and check that there's a shared understanding of the expectations." - R5

Table 10 - Enablers Division B

First-Order Codes	Second-Order Categories	Aggregated Theme
Constant communication to understand main needs of people Adjusting way of communicating depending on receivers' needs	Aligning communication with needs	
Emphasizing importance of knowledge to gain more attention Identifying knowledge gaps for other colleagues Selecting specific knowledge due to its perceived importance	Working strategically to emphasize knowledge's importance	
Working together for the benefit of the company Solving problems with the use of a diverse knowledge base, i.e, different people Realizing the interrelatedness of activities Being sceptic of new knowledge to facilitate a deeper discussion	Interrelated problem-solving for a common outcome	
Working with transparency and providing a safe space for everyone Physical proximity leading to more interactions Interactions leveraged by a supportive environment	The role of a close, supportive environment	Knowledge transfers as iterative processes with strategic purpose
Seeing the knowledge being used and feeling self-fulfilled Sharing knowledge in order to receive at a later stage Seeing an engagement from the receiver, increases willingness to share knowledge from the sender Gaining trust with people to ensure a smooth exchange of knowledge Enjoying teaching and holding presentations	Motivational drivers and prerequisites for the sender of knowledge	
Keeping an open mind to new perspectives A curious mind that expands to other research domains Actively approaching colleagues to more effectively gain knowledge Identifying need for an expanded knowledge base and asking people for the right knowledge Importance of having an interested receiver	Curiosity as key driver for receiver of knowledge	

Interviewees also stress the importance of working strategically to enable knowledge transfer. One key aspect of this strategic approach involves deliberately emphasizing the importance of specific knowledge to gain more attention. By communicating the relevance and potential impact, senders of knowledge can make it more meaningful and engaging for recipients.

"When I try to explain our problems and the questions that I have, I show them the importance. If they know that it is vital, if they know it's important, then they put more attention automatically to the problem that they're facing." - R2

Another strategic measure to enable knowledge transfer is identifying knowledge gaps in existing teams or individuals. Respondent seven explains that they, as a Technical Leader, have to maintain a more overarching view of where the group is heading and where the group is currently. Moreover, respondent two explains that understanding where knowledge is lacking and who needs it encourages a more targeted and purposeful knowledge transfer.

"If I see that my colleague in our team is working very much with another team, and he is the best person to communicate with them, then I usually try to fill another gap and communicate with other people. This happens when we receive some information which we think others do not know and it would be important for them." - R2

Another important aspect of enablers identified by respondents was the curiosity of people who are recipients of the knowledge being shared. This second-order category encapsulates several interrelated enablers that reflect the attitudes and actions of the receiver of knowledge in a knowledge transfer. Respondents highlight the motivational or curious aspect of how people can show genuine interest, ask questions, and demonstrate a willingness to learn to encourage the transfer.

"You can always go and spend time on reading and trying to expand your knowledge by using different available tools, but usually it's much faster if you go and ask the question to the person who has that knowledge." - R2

The willingness to seek knowledge is also related to the willingness to engage with others, which is emphasized among numerous respondents. For instance, respondent four emphasizes the importance of being engaged to make things happen. Similarly emphasized was the sender's willingness to share his or her knowledge with others, labelled as the motivational drivers and prerequisites for the sender of knowledge in the second-order category. Open and communicative people who offer knowledge to others enable the transfer process. This willingness was closely tied to an underlying trust between the parties involved. Developed often through previous collaboration experience, trust creates a safe environment to share and receive knowledge.

"When you notice that someone actually takes in what you say, that they come back and have integrated what you discussed last time, showing progress, it is stimulating and encouraging to see that here is someone who is motivated and wants to move forward. That is usually enough for me to want to continue sharing knowledge." - R5

Another catalyst for the motivation to share knowledge is the recognition of its value and the understanding that withholding it offers no personal advantage. This perspective contrasts with the earlier notion of protectionism, which may be explained by factors such as seniority.

"I really enjoy being able to teach and help people understand. It is part of my role, so to speak. I have realized that I don't gain anything by holding back information, so for me, it becomes quite straightforward." - R7

In some cases, respondents also described their willingness to share as depending on a give-and-take relationship. Described as a personal investment, the transfer of knowledge was seen as a way to support others and as a means to gain something in return, often in the form of help or access to others' expertise. This forward-looking perspective adds another intriguing dimension of knowledge transfer.

"In knowledge sharing, you're planting seeds with the hope of eventually being able to harvest them over time. Some seeds never grow beyond just maintaining the basic level; they never really bear any fruit. Meanwhile, others turn out to be really good investments." - R1

A further enabling mechanism that emerged is the role of constructive scepticism, emphasized by some respondents. Rather than passively accepting a knowledge transfer, respondents describe how critical questioning and discussion facilitate a deeper understanding and an iterative discussion. This aims to create a more meaningful and accurate understanding of the shared knowledge. Embracing critical questioning as something positive, rather than interpreting it as an obstruction, can therefore support stronger collaboration and knowledge transfer efforts. The knowledge transfer becomes more transparent and intentional in mobilizing people towards common goals.

"I have a colleague who jokingly calls me the big skeptic. But it is not just about having an opinion, I always ask questions, like 'Have you thought about this?' And 'Why is it like that then?' I ask questions that, for me, help piece the whole puzzle together." - R1

Finally, the role of a close and supportive environment emerges as an enabler for knowledge transfer. Creating a space where employees feel welcomed is emphasized by respondent seven, where interactions are leveraged by a supportive environment that encourages openness.

"But in general, we work a lot with transparency, openness, people talk about a safe space. You feel that this is a group where we can talk about everything and ask 'stupid' questions." - R7

Moreover, the importance of working together as a team is identified as an important factor in initiating and sustaining knowledge transfer. Similar to Division A, some respondents emphasize the need to work on-site for teamwork to function properly. However, this is not emphasized to the same extent as in Division A. Respondent one encapsulates this essence, stating that physical proximity eases the initiation of a conversation. Being physically present and close to colleagues is essential, since it leads to regular employee interactions.

"I mean, most of our work is resolved with the support of our colleagues. So interaction is very important, and we can only reach our targets through this way of working." - R2

These findings highlight the respondents' views on the critical role of a close and supportive environment. Respondents indicate that a supportive culture not only supports knowledge transfer, but it also actively shapes the willingness and frequency with which it occurs.

4.3 Contrasting Differences Between Division A and B

While numerous similarities are found between the two divisions, compelling differences also emerge. Table 11 displays the differences between Division A and Division B, focusing on the specific divisional contexts, the knowledge exchange process, and barriers and enablers to knowledge transfer.

To begin with, the divisional context differs between the groups in multiple aspects. While Division A has a long-standing history of research built on foundational guidelines from early innovations, Division B works more through established practices such as mentoring, education, and reverse engineering to manage possessed knowledge in a growing team. Moreover, Division B works more in functional, knowledge silos and thus they are less prone to share knowledge with others outside of the team or subdivisional group. Division A instead works cross-divisionally, as their expertise needs to be considered in multiple functions of the product. This prevents them from having a narrow perspective and thus being more collaborative. A divisional factor that further influences the experienced time constraints in Division B can be derived from its market focus, leading to shorter time horizons. Essentially, proximity to the market may demand a greater adaptability and result in more frequent or tighter deadlines.

The findings in sections 4.1.2 and 4.2.2 show that spontaneous iterative interactions to facilitate knowledge exchange processes occur more in Division A than in Division B. In contrast, Division B highlights more formalized processes, one of which is how they work with reverse engineering. As one respondent from Division A noted, the division might require more formalized processes if their team were larger, implying that scale influences the structure. Given its larger size, Division B depends more on the formal processes to manage knowledge transfer. These contrasts underscore how divisional context significantly shapes the nature of knowledge transfer practices.

Furthermore, and arguably a result of its strong market focus and importance of adapting to changing market conditions, respondents in Division B express how they utilize reverse engineering to be adaptable and react to market trends. Although the knowledge originally comes from outside the organization, members of Division B work together and share their experiences when trying to understand other products or solutions, effectively facilitating knowledge transfer among them. Moreover, respondents in Division B have expressed their use of mentorship to share the long-term experiences and directly transfer knowledge, which Division A does not have.

As Division B expands further and changes occur frequently, evident in the divisional context, respondents express information overload as a barrier to knowledge transfer. Notably, this challenge was not raised by members in Division A. The expanding divisional context in Division B could be a reason for members' evidential narrow perspective that hinders knowledge transfers. It is not reasonable to be an expert on everything, and members of Division B are naturally focused on their specific research niche and do not actively search out opportunities to engage in interrelated topics. Concerning information overload, Division B also addresses an intentional withholding of knowledge from certain teams, labelled as knowledge gatekeeping. This inherently limits knowledge transfers among divisional members. For Division A, one notable barrier that sets them apart from Division B is the challenge posed by remote work. Respondents describe it as limiting employees' participation, visibility, and inclusion in engaging knowledge transfer practices. While similar challenges were mentioned by some respondents in Division B, they were not perceived to have the same level of negative impact.

Members of Division A emphasize social capital positioning to ensure that other employees recognize and understand where certain knowledge is to be found within the division. In contrast, Division B works more with strategic knowledge management. As members of Division B are surrounded by information that continuously changes, the sender of knowledge needs to emphasize its importance, or else it will be dismissed by the receiver. Moreover, from a broader perspective, the divisional structure within Division A appears to foster collaboration and close internal relationships, facilitating knowledge transfer. In contrast, such a structure is less evident in Division B, where a more siloed functional structure may limit interaction and collaboration. This fragmentation further underscores the need for Division B to work strategically with knowledge management. In the absence of naturally occurring collaboration due to structural isolation, knowledge transfer requires deliberate efforts from the sender of knowledge to contextualise their message. Lastly, while both divisions exhibit clear motivational drivers, self-fulfillment emerges as a particularly strong factor in Division B. This emphasis on individual drivers may reflect the larger, individual-oriented work environment.

Table 11 - Overview of Differences

Properties of KT/ Division	Division A	Division B
Divisional Context	Guidelines and heritage shaping ways of working and researching Cross-sectional knowledge sharing Proactive, future-focused approach	Expanding research division Dynamic research area prone to changes Market-focused and shorter time-horizons
Exchange Process	Spontaneous collaboration Informal meetings creating chain reactions, meeting more people	Mentorship Reverse engineering
Barriers	Remote work *No additional distinct differences for Division A, compared to Division B, were observed.*	Information overload and inconsistent system usage Intentional withholding of knowledge from certain teams, "Knowledge Gatekeeping" Narrow perspective
Enablers	Social capital positioning, or personal marketing, to showcase that you and your expertise exist Divisional culture fostering collaboration	The need to work strategically and emphasize knowledge's importance Self-fulfillment as a motivational driver

The section above has presented the findings of our comparative study, delved into the separate entities, and explored mechanisms evident among the members of the two divisions. While certain differences between the two divisions are evident, the divisional context remains interrelated and influential, regardless of the specific exchange process, barrier, or enabler to knowledge transfer. The subsequent section will consider this and discuss the findings of how existing enablers and barriers to knowledge transfer influence the practices across the two research divisions.

5. Discussion

Our findings reveal a wide range of enablers and barriers that influence knowledge transfer, and in differing ways, highlighting the complexity of this process. In the following subsections, we take ground in Figure 1 to discuss our findings in greater depth and present our modified framework. We examine the most compelling insights from each division and connect our observations to existing literature, while providing nuanced perspectives that offer an extended view on knowledge transfer. These nuances ultimately support the theoretical development and practical implications of knowledge transfer.

5.1 Bridging Theory and Empirical Evidence

The theoretical framework of knowledge transfer presents an iterative process between a sender and a receiver of knowledge. Throughout this exchange, various enablers and barriers can facilitate or hinder the intended message. While this typically occurs within an organizational context, in the case of this study, it is more accurate to refer to the divisional context, as the two divisions operate within the same organization. The findings of this study reveal notable similarities with existing literature on knowledge transfer, reinforcing previously identified patterns and thus illustrating their continued relevance within the context of the case company. At the same time, the analysis identified distinct differences between the two divisions, highlighting contextual factors that shape how knowledge is shared among individuals. The alignment with existing literature and the division-specific variations will be presented and discussed similarly to the previous findings section. First, the exchange process will be examined, followed by a discussion of the enablers to knowledge transfer, and finally, the barriers to knowledge transfer will be discussed.

5.1.1 Contrasting Exchange Processes

Both examined divisions work with interactive, structured, collaborative activities and stand-alone processes to transfer knowledge. The stand-alone processes are signified with what Polanyi (1962) refers to as explicit knowledge, characterized by codified knowledge expressed through presentations, documents, or other communication tools. While the characteristics of explicit knowledge do not, in themselves, create a competitive advantage (Grant, 1996), they can nonetheless be utilized to enhance the organization’s overall knowledge base. An example of such exchange is evident in the education of new employees entering the organization or in sharing the progress of a project through PowerPoint presentations. This ensures that both divisions maintain a relevant and consistent knowledge level, allowing employees to align with ongoing projects and organizational standards. Moreover, interactive collaborative activities include more tacit elements, which, in contrast to explicit knowledge, over time enhance the organization’s knowledge advantage. They are characterized by more iterative processes, allowing for an interaction where the sender ensures that the receiver has captured the intended message. An example is brainstorming sessions, where the agents involved iteratively try to decode tacit knowledge and solve

problems. This could be related to Nonaka's (1994) SECI model of creating new knowledge through externalization, where tacit knowledge is converted into explicit knowledge. However, due to the complex inherited nature of knowledge, aspects of experiences or cognitive differences, containing tacit components, are still expected to remain unshared between the individuals in the process.

More interestingly, we identify differences between the research divisions and how knowledge exchange processes occur. Mentorship is expressed among respondents in Division B, where the sender focuses on teaching a subordinate experience, implicitly transferring tacit knowledge. Moreover, reverse engineering emerged as a process in which employees in Division B discuss and iteratively work together. In these situations, employees share their previous experiences to uncover important insights. Both processes exemplified are characterized by a knowledge transfer containing more tacit elements, which, according to Grant (1996), builds a sustainable competitive advantage. Nevertheless, these processes are highly formalized. We argue that, due to the division's larger and siloed structure, formalized processes are relied upon to a greater extent. In these environments, informal, spontaneous exchanges are less feasible, and structured mechanisms become necessary. Formalization thus becomes a practical necessity and a strategic response to divisional complexity. While it may reduce flexibility and informal meetings, it provides a consistent and scalable way of managing knowledge transfers.

Meanwhile, the respondents in Division A emphasized their engagement in spontaneous exchanges as a way to transfer and build knowledge. As spontaneous exchange takes place in informal settings, interactions become even more iterative due to the absence of a predefined agenda. The spontaneous collaboration is distinguished by its purpose of reaching a knowledge spillover, which over time increases the tacit knowledge base. These spontaneous meetings can be seen as both a product of and a driver of the open, collaborative environment prevalent in Division A. On one hand, the frequency of the informal meetings reflects a divisional culture that encourages approachability and collective engagement. On the other hand, such interactions, or processes, actively contribute to the establishment of a welcoming culture. By reaching out to colleagues for spontaneous, informal interactions, one lowers the barriers for future exchanges and fosters a welcoming environment. This subsequently initiates a chain reaction, where spontaneous and informal knowledge transfer in Division A becomes more frequent and fluid. Simultaneously, the informal meetings catalyze increasing levels of trust, operating as an enabler to knowledge transfer in the knowledge exchange between the sender and receiver.

A nuanced factor that may further explain this divergence is the notion of divisional maturity. While Division A has a long-standing history with established norms, Division B has recently undergone a significant transformation along with rapid growth in its employee base which may have disrupted practices and created a context of change and adaptation. In this sense, Division B may reflect a lower level of divisional maturity in some areas, particularly with respect to certain knowledge transfer practices. The reliance on more structured practices could therefore be seen not only as a way to manage the division's complexity, but also a way

to establish order and consistency in a context where informal processes have not yet been stabilized. In contrast, Division A's informal, spontaneous exchange practices can be seen as a result of its higher maturity in cultural and relational terms. A long-standing divisional identity and shared purpose allow for high-trust interactions. Maturity here thus refers less to formal processes and more to strong relationships where knowledge is shared naturally without supporting structured systems. This raises an important insight that the suitability of structured or spontaneous knowledge transfer processes may be influenced not only by the divisional design but by the stage and type of maturity.

The different exchange processes discussed illustrate the similarities and differences in the knowledge transfer process presented in the literature review. In the subsequent segment, the enablers will be further delved into.

5.1.2 Enablers to Knowledge Transfer in Practice

Our findings complement, in broad terms, many of the enablers to knowledge transfer Shahbaznezhad et al. (2019) mention, whereof dissemination capacity, motivation, closeness, and culture were the more predominant ones in both divisions. Dissemination capacity was apparent among almost all respondents as a critical component to succeed with conveying one's intended message. Additionally, it was found that reflection serves as a crucial cornerstone for enhancing one's dissemination awareness. This occurs when individuals reflect on the receiver's context and adjust their communication accordingly. Nevertheless, this supports the implied two-way street of knowledge discussed by Lockett et al. (2009).

Moreover, motivation or willingness to seek and share knowledge is another enabler identified, confirming previous literature (Watson & Hewett, 2010). Notably, curiosity emerged as a more prominent factor in Division B than in Division A. This may be attributed to some differing cultural characteristics between the divisions. In Division A, a cohesive and people-centered culture extends across the entire division, naturally supporting knowledge-sharing behaviors. In contrast, Division B's culture is more localized, primarily due to its larger size. As a result, employees in Division B rely more heavily on individual curiosity to expand their perspectives and actively seek out knowledge. Nevertheless, in both divisions, the cultural context plays a critical role in shaping employees' views on knowledge transfer and their willingness to engage in it.

Furthermore, Division A employees appear to take on the responsibility of marketing themselves and ensuring others are aware of their existence and expertise. This aligns further with Van den Hooff and Huysman's (2008) argument that less formalized environments depend more on visibility and social capital to enable knowledge transfers. In doing so, their network expands and increases awareness of where knowledge resides. Consequently, individuals are perceived to have a larger group of colleagues in their proximity, and thus, a greater knowledge base. This could additionally be interlinked with the earlier discussion on spontaneous collaboration to facilitate exchange processes. One respondent noted that spontaneous, informal meetings in the mornings or the lunchroom lead to conversations with

colleagues they had not interacted with before. These recurring interactions may lead to increased trust (Watson & Hewett, 2010), fostering a climate supporting collaboration. The interlinkage between these factors signifies the complexity and interrelatedness of knowledge sharing among individuals in a group. Additionally, the relatedness among the enablers found emphasizes the personal and relational theme in Division A.

Conversely, Division B highlights how they, oftentimes, work strategically to emphasize the importance of conveying their message. Operating within a large division, constantly adapting to changing market needs, employees are often faced with changing or differing views on knowledge. To break through the knowledge noise, one must therefore underscore the relevance and utility of the knowledge being shared. This enabling practice aligns with Watson and Hewett's (2010) argument that if individuals recognize the value in the knowledge itself, they will be more willing to share and receive it. Accordingly, to facilitate a successful knowledge transfer, Division B makes use of the enabling mechanism that highlights the importance of knowledge intended to be shared. Again, in a divisional environment that adapts to changing market conditions, such framing becomes essential. Moreover, the presence of several different IT systems, causing an information overload, makes it even more critical for Division B's employees to highlight which knowledge is worth sharing and why.

In all, the two divisions' identified enablers differ in distinct characteristics. Respondents in Division A emphasize the importance of social capital for facilitating knowledge transfer, whereas Division B places greater emphasis on strategically managing knowledge by emphasizing its importance. These differences could be attributed to the divisional nature of the two divisions. Division A operates in a more cross-divisional manner and appears to be less influenced by market competition. In contrast, Division B is more market-oriented and tends to work in knowledge silos due to its several niche expertise areas. These differences become particularly clear when comparing the experiences of technical experts from each division. For instance, respondent eight from Division A describes how the demonstrations of results previously involved the whole division, emphasizing the cross-functional collaboration and knowledge sharing. Meanwhile, respondent two from Division B notes that they rarely have time to look at other perspectives as they are so focused on their specific domain. This contrast underscores the degree of integration both between teams in each division and into the broader organizational machinery, thus highlighting the necessity of a different strategic focus.

In the upcoming subsection, we dissect and discuss our findings relating to how barriers in practice may influence the knowledge transfer across both divisions.

5.1.3 Barriers to Knowledge Transfer in Practice

A comparative analysis of barriers to knowledge transfer across Division A and Division B reveals fundamentally different underlying challenges. Employees within Division A frequently emphasize their engagement and capability when it comes to knowledge transfer.

As a result, personal barriers, such as lack of motivation or distrust, are less prevalent. Instead, challenges are mainly related to those that are contextual and structural, remote work being one of them. In contrast, Division B presents a dual set of challenges. Alongside structural barriers, personal dynamics, such as narrow perspectives, emerge more frequently in the data.

Nevertheless, several barriers are shared across the divisions, particularly those related to time constraints. Regardless of underlying dynamics, employees in both Division A and Division B frequently highlight a lack of time as a key barrier to engaging in knowledge transfer, which aligns with the findings of Shahbaznezhad et al. (2019). This shared experience across both divisions underscores how time, or lack of, functions as a constraint that cuts across otherwise distinct cultural and divisional contexts. It is also worth mentioning that the time constraint barrier is evident for both the sender and receiver in a knowledge transfer relationship. Neither do senders have time to transfer knowledge, nor do receivers have time to seek out and absorb knowledge transfer opportunities. However, despite these similarities, there are also some notable differences regarding how time constraints shape the conditions for knowledge transfer in each division. In Division B, time constraints and prioritization of daily activities are described as a barrier, leaving little room for knowledge transfers to take place. In contrast, Division A presents a more varied picture. While time constraints are certainly recognized as a challenge, their perceived impact on knowledge transfer depends more on the role and seniority of employees. Less senior employees have similar perceptions as those in Division B; however, employees with more senior positions report greater flexibility in prioritizing time for knowledge sharing.

One notable barrier to knowledge transfer identified within Division A was the challenge posed by remote work. While Division B acknowledges that working in close physical proximity facilitates better knowledge exchange, Division A places greater emphasis on remote work as a clear-cut challenge. One employee described how virtual collaboration often excludes individuals online from critical discussions and fails to support knowledge transfer. Theoretically, physical distance has been recognized as a barrier to knowledge transfer, explained in depth by Shahbaznezhad et al. (2019). However, this barrier has been mainly conceptualized in terms of geographical separation between sites or teams, such as working in different buildings, rather than through the lens of remote work arrangements. Division A's experiences underscore an evolving nature of this barrier, revealing how remote work environments can disrupt visibility and ultimately fragment the knowledge transfer between individuals.

In Division B, keeping knowledge from reaching certain employees emerged as a barrier to knowledge transfer, where respondents indicate that they, at times, deliberately hinder knowledge from being shared across teams or individuals. At the same time, respondents from Division B describe being overwhelmed by an abundance of information spread across numerous systems, formats, and platforms. In such an environment, the absence of a filtering mechanism, or knowledge gatekeeper, can turn much of the knowledge irrelevant or unmanageable. Without clarity on what is useful and applicable, employees might entirely

disregard future attempts to engage in knowledge sharing. As a result, the perceived value of a knowledge transfer exchange is reduced, which aligns with the findings by Watson and Hewett (2006), who argue that individuals are more likely to perceive knowledge as useful when related to their work and problem-solving needs. Moreover, the deliberate withholding of knowledge in Division B can also be interpreted through the lens of divisional priorities and management values. As Milne (2007) observed, when employees believe that individual performance metrics are of greater value than broader organizational goals, they are more likely to withhold knowledge intentionally. This behavior may thus, in part, reflect the broader divisional context of Division B, which is more closely tied to measurable outputs.

The preceding sections of the discussion have examined the characteristics of knowledge transfer within the context of divisional differences. Both similarities and differences have been analyzed and elaborated upon concerning the previous literature and the applied theoretical framework to interpret the empirical findings through theoretical perspectives. The following subsection will present, discuss, and delve into key, nuanced insights of this study.

5.2 An Extended View on Knowledge Transfer

Although the initial framework used captures many of the intricacies of knowledge transfer, some nuanced findings that arise from our comparison allow for modifications. These insights not only refine our understanding of how knowledge is shared within the divisional contexts but also reveal previously underexplored dimensions that warrant a closer examination.

Interestingly, even though knowledge gatekeeping naturally functions as a barrier to knowledge transfer in theory, it need not always be interpreted negatively. Rather, the act of knowledge gatekeeping in Division B serves as a critical filtering function that helps direct attention to what is important and shields employees from irrelevant information noise. This nuanced view suggests that gatekeeping, when driven by relevance rather than exclusion, can be strategically beneficial. This highlights a difference between barriers in theory and barriers in practice. While theoretical frameworks depict barriers as obstructive, real-world contexts reveal a more nuanced reality.

However, this also introduces new considerations. Relying on gatekeeping places significant pressure on the gatekeeper to make accurate judgments about which knowledge to prioritize and which to filter out, and to which employees. This gatekeeping-responsibility suddenly becomes nontrivial, as poor decisions might exclude certain employees from potentially valuable insights. Moreover, while knowledge gatekeeping arguably can improve short-term efficiency by focusing on what is currently relevant, it may also increase the risk of tunnel vision. Therefore, the effectiveness of knowledge gatekeeping may depend on specific project phases. In early phases, a more inclusive approach to knowledge transfer may foster greater creativity. As projects move closer to implementation, tighter knowledge gatekeeping may

help streamline decisions. This highlights the importance of situational awareness and adjusting knowledge transfer practices, rather than applying a similar approach across all contexts. Similar findings of knowledge gatekeeping are not identified for Division A, which works more fluidly and across teams within the division. Once again, highlighting how knowledge transfer, and its barriers, vary between the two research divisions.

Across both divisions, we also identify a counterintuitive finding regarding time constraints. In certain cases, time constraints act not as a barrier but as a catalyst for knowledge transfer. When solutions must be found quickly, collaboration intensifies and employees are forced to share expertise, find help, and co-create solutions. Here, urgency can prompt a more direct and focused need for knowledge transfer, cutting through the barrier. Rather than blocking knowledge transfer, time constraints can function as a trigger for it. This insight highlights time as a complex factor in knowledge transfer. While initially viewed as a limited resource that hinders the exchange process, it can function as a force that drives purposeful interaction. Again, we can distinguish barriers in theory from barriers in practice, similar to our discussion on knowledge gatekeeping.

Moreover, both divisions highlight barriers related to a sense of comfort and the corresponding risk of not actively seeking out opportunities for knowledge transfer. In Division A, this challenge is openly acknowledged and one respondent mentions a practice of sharing thoughts and knowledge at early stages to counteract it, and prevent knowledge silos from forming. In contrast, such practice is not prominently featured in Division B. Instead, a more reactive approach appears to be more prevalent, where knowledge transfer occurs when the need arises. This may, in part, stem from a narrower perspective. Nevertheless, one enabler mentioned in Division B stands out as particularly relevant to mitigate this challenge. The importance of helping others understand the broader context and see the bigger picture could reduce narrow perspectives and effectively encourage more proactive knowledge transfers. Interestingly, this insight can lead us to a broader conclusion. In many ways, barriers to knowledge transfer are inevitable. The key lies not in attempting to eliminate these but in understanding and leveraging enablers to navigate and overcome them. In that sense, the thought of eliminating barriers might be a naive approach. Rather, one must use enablers that proactively work around these challenges, ensuring that knowledge transfer continues despite the present obstacles.

These key insights reveal nuanced findings deepening the understanding of knowledge transfer dynamics. The traditional view of knowledge transfer practices perceives enablers as inherently positive and barriers as negative, often treating both as static elements. Our findings, however, show that barriers and enablers, under certain conditions, can function as a productive tension. When recognized and actively addressed by employees, barriers such as time constraints and knowledge gatekeeping can encourage more deliberate and strategic knowledge transfer efforts. This insight further suggests that barriers should not be seen as factors to eliminate, but rather as frictions to navigate around, or even leverage, to enhance knowledge transfer. For instance, Division B’s barrier of narrow perspective was addressed

through emphasizing the importance of the knowledge, effectively using one enabler on an evident barrier.

Previous examples illustrate an interesting and thought-provoking interpretation that enablers and barriers' influence on knowledge transfer practices is neither static nor one-sided. Instead, enablers and barriers exist in a state of dynamic interdependence, where the presence or strength of one can alter the impact of the other. This relationship challenges the earlier theoretical model of the study. Enablers can and should be capable of actively mitigating the presence of certain barriers. At the same time, barriers may interact, counteract, or even bypass enablers, effectively hindering knowledge transfers. For example, Division A demonstrates that even in a culture rich with collaboration, openness, and engagement, prevalent structural factors can stifle outcomes. Conversely, Division B highlights how even well-defined systems can falter in the face of protective or siloed behaviors.

While the theoretical framework presented in Figure 1 encapsulates the divisional context, knowledge transfer process, enablers, and barriers to knowledge transfer, our findings extend this framework by accounting for a dynamic force between enablers and barriers, where an active engagement from the sender or receiver may influence the key mechanisms within the transfer process. This is an iterative process where enablers or barriers can bypass the preceding mechanism, rather than being a static relationship. This is illustrated in Figure 3 below.

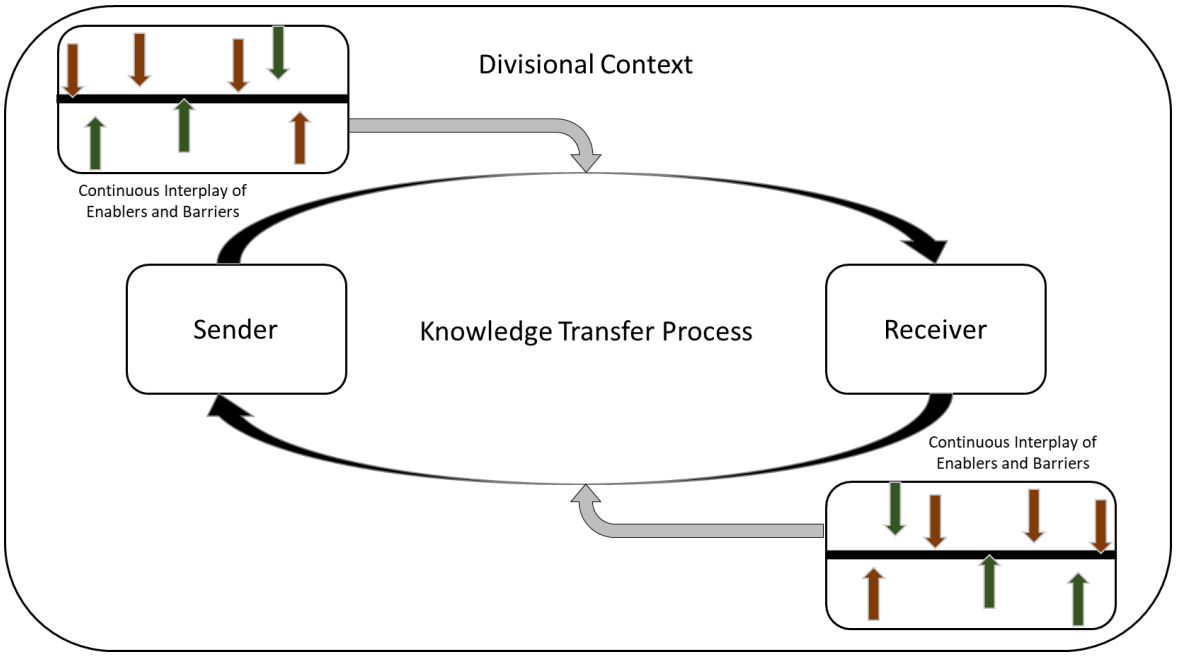

Figure 3 - An updated illustration of knowledge transfer

To summarize the discussion, our findings not only identify how enablers and barriers influence knowledge transfer practices across two divisions, but also bring contributions complementing the theoretical framework. The differences between Division A and Division B's divisional context carried immediate implications for what enablers and barriers to knowledge transfer were the most influential. Culture seems to be a more predominant enabler for Division A in their research-focused and cross-sectional divisional context. Meanwhile, information overload is a predominant barrier for Division B due to their size, broad range of experts, and market focus, causing siloed knowledge corridors. Last but not least, the dual nature of knowledge gatekeeping emerges as a novel finding in this study, as it has not been identified in the existing literature. By acknowledging a barrier's dual nature, we distinguish between barriers in theory and barriers in practice. A mechanism that is considered a barrier in theory may, under specific real-world conditions, function differently, or even act as an enabler. Conversely, a barrier may align with the theoretical expectations in some practical settings, reinforcing its role. This highlights the importance of context in understanding how barriers operate in practice. Additionally, the active use of suiting enablers can bypass or mitigate evident barriers. In contrast, barriers may obstruct and hinder present enablers to knowledge transfer. This further highlights the importance of situational awareness in navigating complex knowledge environments.

6. Conclusion

The final chapter of this thesis is divided into three parts. Initially, it provides an answer to the research question before delving into the study's main contributions and proposes relevant, practical managerial implications. Finally, it discusses the study's limitations and suggests areas for future research.

6.1 Answering the Research Question

The aim of this thesis has been to answer the research question of how existing enablers and barriers influence knowledge transfer practices across two divisions at an automotive manufacturing firm. Existing enablers and barriers influence knowledge transfer practices in fundamentally context-dependent ways. This thesis finds that each divisional context, shaped by structural, cultural, and historical factors, significantly affect not only which enablers and barriers become prominent, but also how they function differently in practice within the same organization. As a result, knowledge transfer is not governed by a fixed set of mechanisms, but by a dynamic interplay between enablers and barriers and the specific context in which they unfold.

6.2 Theoretical Contributions and Managerial Implications

While the previous subsection provides a clear answer to our research question, we now expand further on the study's implications and contributions.

The research supports and reinforces many of the present enablers and barriers to knowledge transfer cited in existing literature. However, by analyzing these elements within two distinct divisional contexts, our study highlights that their function and influence are highly dependent on the divisional context. While a certain enabler, such as curiosity, is evident for both divisions, its degree of influence on knowledge transfer practices differs between the divisions. Additionally, knowledge gatekeeping illustrates the difference between barriers in theory and barriers in practice. While theory depicts barriers as inherently negative, our study highlights that barriers in practice, such as knowledge gatekeeping, can serve a constructive purpose of shielding employees from information overload, fostering more thoughtful communication, and thus functioning more similarly to an enabler.

Moreover, enablers and barriers to knowledge transfer can interact in complex ways, sometimes serving to bypass or neutralize one another. This continuous interplay underscores the critical importance of situational awareness within the knowledge transfer environment. For instance, the enabler of curiosity can effectively bypass the barrier of a narrow perspective. Conversely, the barrier of time constraints can overpower the enabler of

curiosity, limiting opportunities for exchange despite present motivation. These examples highlight our extended view on knowledge transfer: that enablers and barriers are not merely static factors that exist in isolation, but rather dynamic forces that operate with one another and within the broader divisional context.

Recognizing this dynamism opens new avenues for designing adaptive strategies that respond to evolving conditions, rather than relying solely on static frameworks or best practices. For practitioners, our findings therefore invite a shift to a more strategic and adaptive mindset. A mindset that acknowledges the complexity and leverages the interplay between enablers and barriers to build more resilient knowledge transfer practices. Organizations should invest in building adaptive capacities through culture and strong leadership that help employees work around barriers through appropriate enablers. Importantly, barriers should not be viewed solely as obstacles; instead, practitioners should remain open to the possibility that, in certain contexts, barriers may serve constructive functions and actively contribute to more focused knowledge transfer. By acknowledging these insights, the case company can strengthen its organizational resilience, enhance its ability to manage and transfer knowledge, and maintain agility and competitiveness in an increasingly knowledge-driven industry.

6.3 Limitations and Future Research

Throughout this study, barriers to knowledge transfer have been highlighted as constraints to the exchange process. Analogously, this study has some limitations, or barriers, that prompt further exploration. As the comparative study has been conducted on a single case alone, it derives findings and subsequent conclusions from only one source, thus constraining the robustness of the data. Therefore, a similar study conducted over multiple companies in similar research contexts, but within the same industry, could strengthen our findings.

As this study treats and covers knowledge transfer, one cannot ignore the inherent complex nature of knowledge. Knowledge could either be codified or non-codifiable due to the tacitness of the knowledge, a limitation that inevitably impacts the process of empirical data collection. As a consequence, a case study with workshops or observations of the study objects could possibly add to the introduced nuances and strengthen our findings.

Future research could focus on how the knowledge transfer dynamics within the organization evolve, especially in response to organizational change. Longitudinal studies or broader cross-divisional comparisons could uncover further complexity in how context shapes not only knowledge transfer practices but the very definitions of what constitutes an enabler or barrier, or even both. Additionally, a valuable avenue for further analysis would be to investigate whether certain knowledge transfer practices within each division, when supported or hindered by particular enablers or barriers, are associated with tangible innovation outcomes such as patent filings, academic publications, or the successful completion of projects. This could deepen the understanding of how knowledge transfer practices are directly linked to organizational performance.

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Appendix

A1 - Interview Guide

Introduction

Introducing ourselves, providing an overarching introduction of the thesis subject, and ensuring confidentiality.

Section 1: Background & Role

1. Can you briefly introduce yourself, your role, and your department?
2. How long have you worked in this department and within the organization?

Section 2: Knowledge Transfer in Practice

*Related to Creation of Knowledge**

3. In your latest project, how did you go about building relevant knowledge?
4. How do you typically acquire new knowledge? Through collaboration with others, existing documented knowledge, or external partners? What influences this?
5. Have you tried other methods to improve your knowledge?

Related to Receiver of Knowledge

6. Can you describe a situation where you successfully acquired knowledge from others?
7. Has knowledge shared by others in your department had any impact on how you approach your work? If so, how?
8. Can you describe a situation where you were unable to absorb or use knowledge that was intended to benefit your work?
9. How would you explain your colleagues' motivation to share knowledge with others?

Related to Knowledge Exchange

10. Are there established processes for knowledge transfer where you collaborate and learn from each other, or does it happen more spontaneously?
11. Do you see any barriers that limit how knowledge is shared between individuals? If so, what are they?
12. What factors do you consider most important for effective knowledge transfer?
13. What improvements or changes would you suggest to strengthen knowledge transfer within your department?
14. Do you share knowledge more with some colleagues than others? If so, why?
15. Do you possess work-related knowledge that you deliberately withhold from your colleagues? If so, why don’t you share it?

Related to Sender of Knowledge

16. Can you provide an example of a situation where you shared your knowledge or expertise with others in your department, and how did it happen? Was there anything that worked particularly well?

17. Can you mention an occasion where you felt that your knowledge sharing was not received? What do you think caused that? Do you feel your contribution changed the outcome, improve it, or had little effect? Did your contribution have an effect? Do you know if the other individuals used your contribution?
18. Do you adjust how you share knowledge depending on the recipient? In what way/why?
19. What motivates you to share your job-specific knowledge with others?

Related to Divisional Context

20. Are there any cultural or structural factors within your department that influence the ability to share knowledge?

Section 3: Conclusion

21. Is there anything else you would like to add?
22. Would it be okay if we follow up with additional questions if needed?

**Disclaimer: The section on creation was introduced to examine additional points of view outside the scope of this research.*