The interplay between knowledge management and the social dimension of business IT alignment

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Abstract

Only a few studies have investigated the nexus between knowledge management practices and the social dimension of business-IT alignment (BITA), despite the critical roles of both in fostering collaboration between business and IT as well as achieving organisational goals. This study aims to bridge this gap by investigating how knowledge management practices can improve the social dimension of BITA by overcoming barriers and supporting enablers. A single-case study at a large Swedish company was conducted by using internal organisational documents and interviews with respondents from both business and IT units as a data collection method. The thematic analysis of interview transcripts and document reviews revealed various barriers to the social dimension of BITA that might be overcome by knowledge management practices. Specifically, the results suggest that (1) knowledge exchange and socialisation practices can mitigate barriers to the social dimension of BITA, (2) shared access to knowledge repositories and communication channels can facilitate short-term alignment, and (3) externalisation processes, where knowledge is codified and shared, can improve shared domain knowledge between business and IT within an organisation. These findings contribute to both research and practice by enhancing our understanding of how knowledge management practices can strengthen the social dimension of BITA, ultimately leading to improved collaboration between business and IT and organisational effectiveness.

Keywords

Business-IT alignment, Social dimension, Knowledge management, Practices, Processes

1. Introduction

Over the past three decades, business-IT alignment (BITA) has garnered the attention of researchers of IT management, information systems, and cognate disciplines. The state of the art has come a long way since BITA's conception. A closer look into the literature reveals that researchers have disproportionally focused on some sub-areas and few research contexts of BITA [1]. However, there is a considerable amount of empirical evidence recognising the benefits of aligning the respective IT and business strategies and processes within organisations, especially during this era of digital transformation [2]. Multiple theories and models have also been conceptualised, tested and applied, with many different perspectives, including maturity

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evaluation [3, 4], performance implications [5, 6, 7], scope of conceptualisations [8] and its antecedents [9]. Despite the perceived maturity as a research area and the extensive empirical studies investigating BITA, the phenomenon remains a top concern for leaders seeking rewarding returns from their IT investments and increased competitive advantage [10].

In the years leading up to the turn of the century, BITA research mainly focused on strategic alignment, which is concerned with the strategic fit of IT planning with IT structure and culture [11]. With time, a greater focus on dimensionality has come to the fore, splitting parts of the research area into multiple perspectives, forming the structural-, cultural-, intellectual- and social dimensions [1]. Representing the "people perspective" of the dimensions covering BITA, the social dimension generally emphasises knowledge sharing and communication among IT and business executives and has been given less attention than, for instance, the intellectual dimension, which focuses on the interrelationships of strategic plans and their formalisation [12]. A limited number of studies have acknowledged the paramount importance of a strong alignment of the social dimension of BITA, with emphasis on shared domain knowledge as the key antecedent to long-term alignment between business and IT [13]. While much prior research attempted to highlight the road maps to improve alignment by presenting frameworks, models and best practices, the remaining studies were preoccupied with identifying which barriers organisations are likely to encounter [14]. For instance, Chan and Reich [12] identified the alignment challenges by categorising them from the perspective of practitioners that fall under knowledge challenges, organisational change and locus of control. The challenges surrounding knowledge when seeking to reach and maintain alignment can further be attributed to managers' and executives' lack of understanding of business and IT strategies, lack of awareness of the benefits associated with BITA as well as a lack of industry knowledge [12].

On the other hand, the recognition of the essential role that knowledge plays in organisations, particularly in facilitating change during the introduction of new and emerging technologies, has been consistently evident in both the scientific literature as well as in business practitioner outlets. Not surprisingly, knowledge management practices and knowledge management strategies have long been shown to improve multiple aspects of organisations, such as product and service development and process efficiency [15]. In spite of this, the understanding of its role in promoting the social dimension of BITA in large business firms is still limited.

1.1. Research Problem and Aim

According to Coltman et al. [16], the testimony from researchers and practitioners indicates that there are still areas that need to be investigated further despite BITA being one of the most studied phenomena in the information system domain. The challenge for leaders to achieve BITA emanates from the fact that IT now affects every aspect of an organisation. Thus, there is a need for organisation-wide studies identifying the various practices and processes that hinder or enable BITA. One such practice is knowledge management, which was found to be related to BITA. Prior empirical studies suggest that the various knowledge management activities within an organisation can enable BITA. However, the relationship between the two is not well-explored [12]. There is some evidence recognising the critical role of knowledge management for BITA at the operational levels of businesses, while little can be said for its significance for the relationship and cooperation between business and IT leaders at the executive level (i.e., the

social dimension of BITA). A closer look at the methodology applied in prior studies indicates that quantitative research strategies (mainly surveys) were widely pursued with the aim of better generalisability, attempting to draw a certain relationship between the two constructs [17]. Few literature reviews were also found in the extant literature, while qualitative studies seeking a deeper understanding of the role of knowledge management practices in enabling the social dimension of BITA lagging behind. Qualitative studies that focused on the social dimension of BITA have either limited their scope to specific factors of the social dimension, neglecting a comprehensive view of the role of knowledge management within the dimension or have investigated the relationship within a few sectors and industries for instance, government agencies or SMEs [18, 19]. Thus, there is a lack of qualitative research on the constructs within the complex context of large business firms [20, 21].

This study aims to address the gap in the literature and investigate the relationship between knowledge management practices and the social dimension of BITA in a large business firm. The following research question is used to help us meet the aim of our study: ***How can knowledge management practices contribute to the social dimension of BITA?***

2. Related Studies

2.1. Business-IT Alignment (BITA)

Business-IT alignment, one of the widely researched topics among researchers in the information systems and cognate disciplines [22, 23], refers to the fit between the strategic-, infrastructural- and processes of the business and IT organisations [10]. As IT has become an integral part of today's organisations, BITA has become one of the topics of discussion among researchers and practitioners. A loser look at the extant BITA literature indicates that the focuses of prior researchers gravitate towards identifying antecedents, assessment of BITA maturity, or conceptual and empirical studies debating the different dimensions.

2.1.1. Dimensions of BITA

By mapping the many views that have been studied of BITA, researchers have divided the field of research into dimensions including the intellectual (sometimes called the strategic dimension), structural, cultural and social [12]. Often studied in relation to one another, the intellectual- and the social dimensions have been shown to impact one another to a high degree, with multiple researchers pointing to the importance of including both dimensions in the discussion when studying either one of them in isolation [24]. The intellectual dimension focuses on the strategic plans formulated by the business organisation as well as the IT organisation and the degree to which they complement each other, while the social dimension focuses on how well "business and IS executives in an organisational unit understand and are committed to each other's mission, objectives and plans" [25]. In essence, the intellectual dimension can be said to focus on plans and their methodologies, while the social dimension often focuses on the "people" perspective in working towards alignment [5]. Traditionally, the intellectual dimension has been the more dominant of the two related perspectives, with studies showcasing its importance surrounding alignment strategy, alignment of infrastructure and processes, and alignment of

plans as opposed to the focus on shared knowledge, communication and shared understanding within the social dimension, which has seen lesser attention [9].

The significance of the social dimension of BITA in realising the benefit that can be derived from the use of IT in organisations, though less researched, has been acknowledged in a few seminal works. For instance, building on the empirical evidence showcasing the importance of social dimension in reaching and maintaining optimal BITA, Reich and Benbasat [13] found that the main factors of social dimension that are pivotal in attaining BITA can be attributed to four areas: shared domain knowledge, successful IT history, effective communication between business and IT executives, and the congruence between business and IT planning.

2.1.2. Antecedents of BITA

The findings of prior empirical studies indicate that different antecedents of BITA have implications when assessment is done immediately or in the long run. This is in line with Reich and Benbasat's [13] characterisation of short-term and long-term alignment. Short-term alignment refers to the state in which leaders of the business and IT organisations understand and are committed to each other's short-term plans and organisational objectives. The long-term alignment, on the other hand, describes the state in which the commonly agreed long-term vision of both IT and business leaders for the organisation matches the expected contribution of IT in fulfilling the vision. For instance, IT implementation success and shared domain knowledge are two factors that have been shown to have had an effect on the communication between business and IT executives influencing business and IT planning. While these factors could determine short-term alignment, only shared domain knowledge could be considered an antecedent for long-term alignment. When strictly looking at antecedents of BITA from IT management's role, internal factors such as planning sophistication, shared domain knowledge, and prior IS success, as well as external factors such as organisational size and environmental uncertainty, have been examined [20]. Again, shared knowledge has proven to have the most consistent effects on alignment, and prior IS success has the second most effects on BITA.

From the perspective of a knowledge-based theory of the firm, Kearns and Sabherwal [26] investigated the role of shared domain knowledge (specifically IT management participation in planning and Top management IT knowledge) as contextual factors affecting BITA. The empirical finding showed support for the notions that the participation of business managers in IT planning and IT managers in business planning respectively affected BITA and that both of these planning behaviours were affected by the level of "top managers knowledge of IT" [26]. Additionally, the centralisation of IT decisions and organisational emphasis on knowledge management was, in turn, found to affect top managers' knowledge of IT.

Further research into the social dimension of BITA has suggested that shared domain knowledge, by itself, while a clear antecedent, needs to be understood in terms of how it contributes to mechanisms leading to alignment. One such mechanism is suggested to be shared understanding, defined by Preston and Karahanna [9, p. 162-163] as "*the degree of shared cognition between the CIO and the Top Management Team (TMT) on the role of IS in the organisation*". The authors found that "*a shared understanding between CIOs and TMT about the role of IS within the organisation*" influenced IS strategic alignment positively and that a shared language and shared domain knowledge between the CIO and TMT positively influenced the development of

shared understanding thereby making them antecedents of shared understanding. Extending the concept of shared knowledge, Wagner et al. [27] highlight the importance of distinguishing between shared knowledge and combined knowledge, as the latter constitutes an outcome of knowledge integration resulting in a new knowledge when interaction between people supports the combination of their individual knowledge. It is in this state, the authors argue, that effective and efficient solutions to business challenges can be achieved.

Moreover, contextual factors such as environmental conditions and the size of organisations have been found to have implications on BITA. This is mainly attributed to increasing complexities in organisational structure typically seen with the growing size of an organisation. For instance, unlike SMEs which tend to be structured around business functions with centralised governance, larger business firms instead tend to structure their organisation along divisions such as product lines with decentralised governance for divisional activities. The added complexity in structure invites coordination difficulties and, therefore, an increasing need for mechanisms explicitly targeting alignment practices [20]. Multiple mechanisms related to IT governance have been found to increase the chance for strategic BITA, including the placement of CIOs on executive committees and direct structures of reporting to the CEO from the CIO [28]. The increase in interactions between the TMT and CIO has been shown to stimulate both shared understanding and shared domain knowledge, thereby increasing the chances of both strengthening the intellectual and social dimensions of BITA. Besides, the centralisation of IT decision-making within an organisation can affect the knowledge of IT among the TMT.

2.2. Knowledge Management

2.2.1. Knowledge Management Foundations and Solutions

Knowledge management is a phenomenon that has become crucial for organisations operating under turbulent business, technological and political landscapes. Both practitioners and researchers argue that managing knowledge is of paramount importance as it helps modern organisations manage the complexity of internal and external changes, facilitating and driving innovation, enhancing decision-making, and maintaining a competitive edge in an ever-evolving digital landscape. Even though the literature does not provide a single definition, scholars agree that knowledge management is a formal and systematically creating and cultivating knowledge within an organisation. Thus, it refers to " *the set of business policies and actions undertaken for the purpose of favouring the creation of knowledge, its transfer to all firm members and its subsequent application, all of it with a view to achieving distinctive competencies which can give the company a long-term competitive advantage*" [29, p. 46]. To this end, implementing successful knowledge management practices involves designing and applying strategies, infrastructures, technologies, processes and systems that support the main goal [30]. The practice revolves around central activities that enhance the impact of knowledge on the realisation of the organisation's goals and can be seen as four categories covering discovery, capture, sharing and application of knowledge. It is worth noting that the rapid changes in the external and internal landscapes of business organisations have illuminated the need for knowledge management practices. Domain knowledge complexity is increasing alongside technological advancements, increased complexity in products and services development, growing market volatility and

higher employee turnovers [30, 31].

2.2.2. Knowledge Types and Classification

The concept of knowledge is complex and has seen many attempts at being described systematically in different disciplines [32]. The rationale is that distinguishing between different kinds of knowledge is of great importance for researchers when knowledge is considered a variable when investigating a given phenomena since the failure to do so can risk producing imprecise and incorrect results [33]. However, scholars agree that the digital transformation era has brought both challenges and opportunities for organisations, making knowledge management an important phenomenon regardless of sector and industry. According to De Bem Machado et al. [34], organisations are now faced with setting up knowledge management processes that create and cultivate knowledge, enabling knowledge-intensive value creation.

Explicit- and tacit (also referred to as implicit knowledge) knowledge are two distinct types of knowledge possessed by individuals that commonly make out the most basic level of knowledge distinction [33]. Explicit knowledge refers to knowledge that is concrete and can be codified and easily articulated, often through language or symbols. Unlike the nature of explicit knowledge, tacit knowledge refers to knowledge that is not easily transferable and is hard to express or formalise. It is often acquired through experience, personal insights or practices taking place mostly separate from the practice of explicit knowledge learning [35]. In addition to explicit- and tacit knowledge, types of knowledge can be classified based on the function that it fulfils in a given task or problem [32]. Four such distinguished types of knowledge are situational-, conceptual-, procedural- and strategic knowledge. Situational knowledge refers to knowledge of how situations appear in specific domains, for example, how problems arise in a particular domain. This type of knowledge can serve as a contextual understanding which can be built upon by other types of knowledge. Conceptual knowledge, often called declarative knowledge, can be understood better as a static knowledge of abstract concepts, principles and facts within a domain [35]. Procedural knowledge refers to the manipulations and actions that are allowed within a domain in order to transition from one state to another. Procedural knowledge can also be linked to the understanding of how to approach and coordinate mechanisms in a system in order to find a solution [32]. Following the same classification of knowledge, the fourth type of knowledge, strategic knowledge, can be distinguished from the three other types of knowledge as it can be applicable to a wider area of problems within a domain as it allows a person to organise a plan based on given information and define surrounding mechanisms of analysis for the problem.

2.2.3. Knowledge Management Processes

Prior studies have identified various processes that could help organisations understand the organisational knowledge resources to improve individual and organisational effectiveness [31]. Becerra-Fernandez et al. [30] proposed four knowledge management processes—i.e., **knowledge discovery**, **knowledge capture**, **knowledge sharing**, and **knowledge application**—and two corresponding sub-processes for each processes. The authors argue that these processes are appropriate to meet the knowledge needs of organisations in this era of digital transformation.

Accordingly, knowledge discovery covers the creation of new knowledge that is either tacit or explicit from prior synthesised knowledge sources, information or data and includes the sub-processes of combination or socialisation. The combination sub-process refers to new knowledge creation from combining "different bodies of explicit knowledge held by individuals" and is traditionally associated with knowledge processing within the organisational theory of organisational learning [36]. Similarly, the sub-process socialisation refers to "creating tacit knowledge through shared experience" and is more often associated with experience from activities as opposed to verbal or written communication.

The process of knowledge capture aims at gathering explicit or tacit knowledge present within individuals, organisational entities or artefacts and includes the sub-processes of externalisation and internalization [30]. Externalisation refers to the process of translating tacit knowledge to explicit knowledge and can include translating knowledge from experience to describe it through figurative language, visual designs or concepts in order for the knowledge to be easier for others to understand [36]. Internalisation refers to the reverse process of externalization by turning explicit knowledge into tacit knowledge which can be done through actions and practice that let the individual learn from others through experience.

Knowledge sharing is the process describing how individuals communicate explicit or tacit knowledge between each other, within groups, across groups or within organisations [30]. Distinguishing the difference between sharing knowledge and sharing of recommendations (i.e., based on one's own knowledge) requires an understanding of the level of internalisation. Knowledge can be said to be shared when the recipient can internalise the knowledge well enough to take action based on it as opposed to applying recommendations without internalising the knowledge [37]. The two sub-processes of knowledge sharing include socialisation (as described previously) as well as knowledge exchange. Here, exchange refers to the communication of explicit knowledge, enabling the recipient to internalize and act upon the knowledge.

The final process, knowledge application, covers the processes of applying the knowledge when performing tasks and making decisions [30, p. 58], however, the individual applying the knowledge "does not necessarily need to comprehend it". The sub-process of directions can be viewed as a substitution for knowledge as it refers to the communication of directives that are sufficient enough for completing a task but don't allow the recipient to internalise the underlying knowledge (Grant, 1996). Routines refers to internalising knowledge that is inherent in procedures, which takes time and multiple repetitions and can be carried out without the presence of explicitly stated directives, rules or communication [38].

3. Research Methodology

3.1. Research strategy

The primary objective of our study is to explore and understand how knowledge management practices can contribute to the increased social dimension of BITA. To meet the aim of our research, furthering our understanding of how knowledge management practices can contribute to the increased social dimension of BITA, a case study research strategy is deemed appropriate. In the extant IS literature, case studies are shown to be the most preferred research strategies among researchers [39]. Prior IT alignment studies, e.g., [40], have also been conducted using

this research strategy. Case studies are best suited when researchers are interested in exploring a complex phenomenon in a natural setting [41]. Both [41] [42] categorise case studies under the constructivist research paradigm founded on the social construction of reality. The merit of constructivism is that it allows researchers to forge a collaboration with their participants [43]. Applying one or multiple data collection methods, researchers might gain access to stories from their participants describing their views of reality. The analysis of these stories, triangulated with multiple sources of evidence (various forms of complementary data), will enable researchers to better understand the phenomena under investigation [41].

The starting point for our study was to look for an organisation which can provide us with the opportunity to identify the relationship between the social dimension of BITA and knowledge management practices. Given the critical role IT plays in modern-day organisations, we argue that the challenges of reaching BITA can be faced by almost all organisations. For the given study, the variable of organisation size played a central role in case selection as it has been shown to determine the level of complexity and amount of resources allocated towards the challenges surrounding BITA [20]. The criteria for the case were, therefore, as follows: (1) the organisation should be a private company without large governmental ownership, (2) the size of the organisation should fulfil the following standardized requirements of a large enterprise with 250 or more employees, reported 500 000 000 kr or more in yearly revenue the past two years, and (3) the business should have an actively employed CIO.

Based on the requirement to fulfill the above criterion, 39 private companies were identified through multiple public records, network platforms and organisation official web sources. The companies were then contacted by identifying the contact information of their CIO after which emails were sent out. In order to speed up the process of getting in contact with the companies, rounds of phone calls were made. After rejecting a few unsuitable offers, one of the initially identified companies responded that they could participate in the study and that they could ensure a satisfying amount of interviews within a fitting time frame. The company was once more inspected, now in more detail, based on public records to verify that it would make a suitable case for the research purpose. This closer inspection focused more on the apparent business culture of the company. The case was deemed a good match for the study, and the offer was accepted.

3.2. Data Collection Methods

To investigate the role of knowledge management practices on the social dimension of BITA, an interpretative approach was adopted. This approach is in line with the aim of our study, focusing on gathering data as provided by participants aiming to capture the holistic view and unique situation in the natural environment [44, 45]. One of the advantages of case studies is that it provides multiple data collection methods fitting the line of enquiry. Thus, the data was collected through interviews and internal document analysis.

As the primary method of enquiry, we conducted semi-structured interviews with participants representing both IT and business units (see **Table. 1** for the complete list of participants). Consistent with prior IT alignment studies (e.g., [3, 40]), we approached leaders from the IT and administration sides. Probability sampling was deemed inappropriate for our study, given our aim is an in-depth insight, not a generalisation, of a phenomenon in the wider population.

Thus, as a starting point of purposive sampling, we adopted a criterion of selection of what [46] defined as "experts". Our interest was in recruiting those who have a deeper understanding of IT alignment and knowledge management practices within the organisation, resulting from their experience and functional status. To ensure we have selected samples that could provide us with the richest information, we investigated the organisational structure of the case organisation.

Table 1: The complete list of interviewees with their roles and functional units.

Code	Role	Domain	Interview Date	Interview length
BIZ1	Business Manager	Business	2024/03/14	45 min.
IT1	IT Manager	IT	2024/03/14	45 min.
IT2	IT Manager	IT	2024/03/14	55 min.
IT3	IT Manager	IT	2024/03/18	45 min.
BIZ2	Business Manager	Business	2024/03/18	50 min.
IT4	IT Manager	IT	2024/03/18	55 min.
BIZ3	Business Manager	Business	2024/03/20	50 min.
BIZ4	Business Manager	Business	2024/03/20	65 min.
BIZ5	Business Manager	Business	2024/03/20	55 min.

3.3. Data Analysis Method

The thematic data analysis method is applied in this study. The method is widely adopted among qualitative researchers as it provides flexibility while enabling a rich and detailed account of data [47]. Braun and Clarke [47] outline six phases of thematic analysis, i.e., familiarising with data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. The procedure involves the search and identification of common threads. The themes emerge as researchers carefully read and familiarise themselves with the raw data. With this in mind, the gathered primary data was read and processed in multiple iterations: (1) on a semantic level, i.e., themes are identified based on the face value or explicit meaning from the data and (2) on the latent level further analysing the underlying meaning that shape the semantic value of the data.

4. Results and Discussions

4.1. The Case Organisation

The case study takes place at a Swedish company which is part of a larger business group focusing on retail with both physical stores located throughout the country. The company has also an e-commerce business. It is the largest company within its market, with over 30 per cent market shares reported in 2023, and employs between 2500 and 5000 workers. The main industry that the company is active in is classified by the American National Science Foundation as one of the five highest knowledge and technology-intensive industries based on the "ratio of an industry's business R&D expenditures to its value-added output". The products and services at the core of the business require knowledge-intensive work processes and are

highly regulated. Formally presented as a support office for the rest of the business locations, the company headquarters hosts approximately 250 employees and houses the main support functions of the business. All of the interviewees participating in the case study are currently employed in management positions at the support office, representing both IT- and business functions. Included in the group of interviewees is the company CIO, who has an executive role in the IT organisation and also sits on the executive board. The company is currently undergoing a large transformation of the IT organisation with a goal of improving the relationship between the IT- and business organisations. One of the projects related to the transformation program is centred around a newly erected IT management structure within the IT organisation called the CIO office housing the IT management team with responsibilities including IT strategy development, IT process development and information security. Another initiative of the IT transformation program has been to increase the presence of IT management representation in other business departments' management group meetings.

4.2. Results

The thematic analysis of the qualitative data is presented according to the Social dimension of BITA as conceptualised by Reich and Benbasat [13].

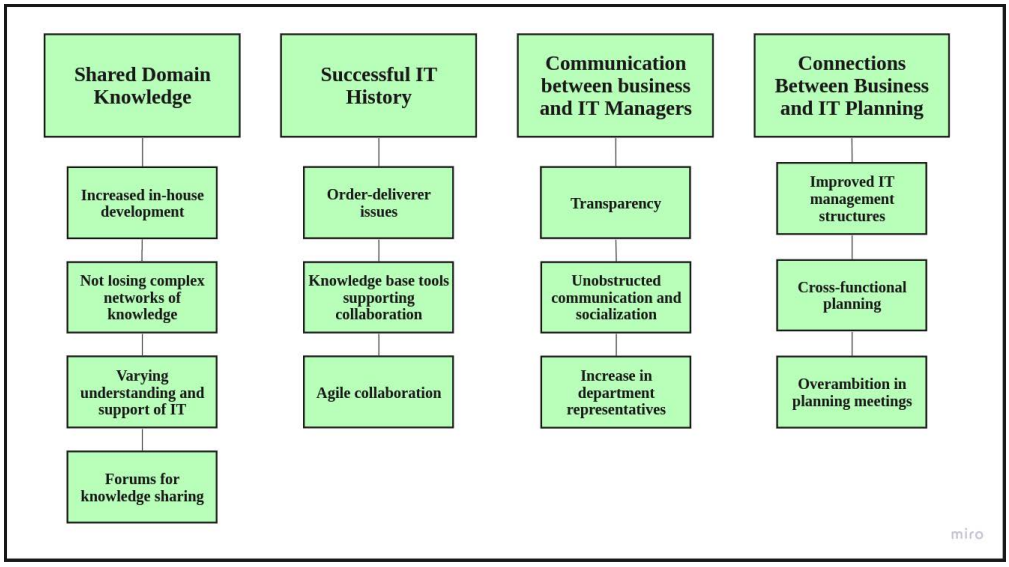

Figure 1: Thematic map.

4.2.1. Shared Domain Knowledge

As supported by ample empirical and tested evidence, shared domain knowledge between business and IT management plays a crucial role in their alignment [12]. The findings of the study suggest that a central barrier to improving the shared domain knowledge is the length of distance between the respective domains developing pools of knowledge, which determines

their accessibility. Reducing the distance between the developing pools of knowledge and, thus, increasing their accessibility suggests improved possibilities for greater shared domain knowledge. Within the case findings, such initiatives are most reflected in the increased shift to in-house IT development, knowledge-sharing forums, agile collaboration, high transparency, and access to knowledge base tools. Similar to the findings of Preston and Karahanna [9], the findings of this study suggest that a shared language supports a shared understanding. The mechanism of placing the product organisation closer to the business organisation allowed product managers to cooperate with business managers to articulate and formulate what and how the software products should be produced. However, attention was drawn to the fact that the role of the product managers helped the business managers understand the issues of ordering features and instead focus on what goals they wanted to achieve in their requests.

4.2.2. Successful IT History

The main barrier to achieving a successful IT history was found to lie in the problems hindering the building of a shared sense of responsibility and vision for IT initiatives. One such inherent problem was order-deliverer relationships between business and IT management. Early adapted, close collaboration between business and IT management in an agile workflow helped strengthen both sides' understanding of each other's expectations and address potential issues in their early stages. Giving both business- and IT-management employees shared access to a knowledge base tool for collaboration in relation to a project has helped with learning from problems of prior projects and reducing the time for planning in collaboration.

The findings from this case can be supported by prior empirical evidence highlighting the strengths and weaknesses of agile development methodologies in supporting collaborative relationships through knowledge management practices. Frequently allowing the customer and the development team to collaborate and share knowledge warrants a shared vision between the counterparts. Access to knowledge repositories in agile development helps bridge communication gaps between departments and facilitates distributed collaboration. Further, findings showcasing the implementation of knowledge repositories combined with agile development also suggest support for knowledge discovery through combining expertise and knowledge with global information, leading to increased explicit knowledge findings [48].

4.2.3. Communications

Finding the right balance of communication amount and structure was the main barrier faced by the company in the case of improving communication. Promoting a culture of transparency in communication channels and reporting and limited structural hinders in direct communication supports efficient paths of communication between departments and hierarchical levels. Additionally offering large amounts of open, centralized ICT communication channels has alleviated unnecessarily high information spreading. Though underlined as an important activity for detailed reflection and learning, casual socialization in the office environment was not a planned activity and suffered no support from knowledge capture processes. Research covering the tacit to explicit knowledge conversion (knowledge externalization process) highlights its difficulty. Nevertheless, processes of knowledge externalisation such as designing storytelling and concept

maps support capturing tacit knowledge through aids of visual presentation and linking of knowledge described in terms of abstract concepts and metaphors [30]. Implementing processes that encourage management employees to build upon organisational stories or concept maps into centralized knowledge repositories can help capture and share tacit knowledge that would otherwise risk being lost.

4.2.4. Connections in Planning

The main barrier to improving connections in planning can be found in the respective organisations and particular departments' lack of understanding of each other's objectives and the character of work processes. This has led to an omission of the perspectives of the other departments and a subsequent focus on planning for their own department goals and objectives as opposed to a focus on planning in cooperation with the other departments. As seen in the results from the case study, a tactic for mitigating the barrier is by improving the structural organisation of the IT strategy function in combination with an increase in domain-specific management representation in each department's management team meetings in an effort to improve cooperative communication. The effectiveness of such initiatives can be supported by the findings of Kearns and Sabherwal [26] both in terms of centralisation of IT decisions as well as department participation in each respective planning meeting.

The results of the case study also share similarities with a study by Ghobadi and D'Ambra [49] on knowledge sharing in cross-functional teams. The authors argued that cooperative communication in cross-functional teams plays a vital role in the quality of shared knowledge, which they define as the perceived satisfaction of its quality and perceived usefulness in achieving their activities. The researchers found that competition for tangible resources increased cooperative communication, while competition for intangible resources such as strategic power and attention negatively impacted cooperative communication. Based on these findings, representatives of other departments should be encouraged to drive the discussion for tangible resources when participating in management team meetings in order to facilitate higher quality of shared knowledge.

5. Concluding Remarks

This study set out to draw an association between knowledge management practices and the social dimension of BITA to answer the question: "*How can knowledge management practices contribute to improving the social dimension of BITA*?"

Our analysis, presented in four main themes, identified multiple barriers to the social dimension of BITA, including outsourced IT solutions, loss of knowledge when employees and consultants left, order-deliverer relationships and overambitious planning that did not take into account the current knowledge resources in the organisation. Based on the findings of prior studies and suggestions from the respondents, the identified issues could be addressed effectively by implementing knowledge management practices. For instance, increased in-house development enables better access to the people and documentation that holds the knowledge surrounding IT solutions. Leader-focused forums are invaluable in facilitating active knowledge sharing in cross-functional collaboration. Shared access to knowledge repository tools and agile

collaboration methods were also found to be helpful in bridging the understanding of each other's domains. Various digital channels can improve communications in terms of transparency. Moreover, fine-tuned IT management structures and cross-functional planning meetings, in combination with an increase in department representatives participating in each other's management team meetings, were also found to mitigate the negative effects of overambitious and individual departmental planning.

Specific knowledge management practices were also found to help mitigate barriers to the social dimension of BITA through knowledge exchange and socialisation processes related to cross-domain collaboration. Furthermore, shared access to web-based knowledge repositories and centralised, open ICT channels can facilitate short-term alignment by supporting planning- and management processes related to cross-domain collaboration projects. Finally, the research findings suggest that externalisation processes could help facilitate improved shared domain knowledge between business and IT organisations. Future research might investigate the implications of tacit knowledge capture systems and processes on long and short-term alignment, focusing on the social dimension of BITA.

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