

From Strategic to Operational Collaborations: The Divergent Nature of Business/IT Shared Understanding

Completed Research Paper

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Abstract

The success of any business/IT collaboration depends on the shared understanding between business and IT professionals (B/IT-SU) on all organizational layers. However, most research on B/IT-SU merely focuses either on top management level or information system development (ISD) teams. This isolated research led to divergent conceptualizations of B/IT-SU. While studies on strategic collaboration concentrate on B/IT-SU of the objectives or the role of IT, ISD research postulates shared language as main B/IT-SU component.

In this paper, we build on major findings of B/IT-SU research, and develop an integrated concept of the relevant dimensions that should be studied conjointly to provide a more consistent view of B/IT-SU. Furthermore, we discuss our concept from three perspectives: (1) strategic collaboration; (2) project collaboration; and (3) operational collaboration. The results provide insights into the key dimensions of B/IT-SU in regard to the distinctive hierarchical layer, respectively, and serve as initial foundation for further investigations of B/IT-SU.

Keywords: Business/IT Shared Understanding, Strategic Collaboration, ISD Collaboration, Operational Collaboration

Introduction

IS research has consistently shown the crucial role of business/IT shared understanding (B/IT-SU) for effective collaboration between an organization's business units and the IT unit (Johnson and Lederer 2007; Reich and Benbasat 2000; Wagner et al. 2014). A high level of B/IT-SU enables better knowledge integration (Karahanna and Preston 2013; Yang et al. 2012), fosters satisfaction in the relationship (Sun et al. 2012), and increases cross-functional team performance (Chakraborty et al. 2010). Even though researchers agree on the importance of B/IT-SU, different definitions and conceptualizations exist. While Preston and Karahanna (2009b) define shared understanding as mutual agreement on the role of IT, Nelson and Coopride (1996) focus on the understanding about the partners' work environment, like tasks, roles, and responsibilities. Reich and Benbasat (1996) declare the firm's objectives as critical aspect that needs to be shared, while Charaf et al. (2013) include language quality as indicator for shared understanding.

In addition, different forms of collaboration have been discussed. While most research on B/IT-SU focuses on strategic collaborations between top managers (Johnson and Lederer 2007; Preston and Karahanna 2009b; Reich and Benbasat 2000), operational-level collaborations are widely overlooked.

Nevertheless, current research highlights the great importance of analyzing B/IT-SU across hierarchies in order to ensure effective organization-wide business/IT collaborations (Wagner et al. 2014).

This paper organizes the findings of prior research by examining and comparing different conceptualizations of B/IT-SU. In our study we found that previous research addresses shared understanding either among top management (strategic collaboration), within IS development projects (project collaboration), or – in just a few cases – among general business and IT staff (operational collaboration). Thus, we assume that each B/IT-SU conceptualization is of different importance in reference to the specific collaboration context. In the following, we investigate the various conceptualizations and tackle the following research question:

RQ: What are the relevant B/IT-SU dimensions within different collaboration contexts?

The remainder of this paper is structured as follows. We first describe the theoretical background of B/IT-SU and its dimensions as discussed in extant IS literature. Second, we give an overview of the applied methodology. Then, our findings are presented and discussed in regard to the three collaboration contexts (strategic, project, operational) in which shared understanding among involved employees is needed. Finally, we summarize our findings and highlight the importance for further studies in this research domain.

Theoretical Background

A Unified Conceptualization of Business/IT Shared Understanding

In an earlier paper, we have already presented a conceptualization of B/IT-SU which integrates various major findings from extant literature into one unified multidimensional construct (Jentsch and Beimbom 2014). Figure 1 highlights this conceptualization, which will be described in the following.



Figure 1. Framework of Business/IT Shared Understanding (Jentsch and Beimbom 2014)

We argue that B/IT-SU consists of two layers: (1) task-specific shared understanding; and (2) team-specific shared understanding. Task-specific shared understanding focuses on technical aspects and is formed by the dimensions *objectives of IT*, *role of IT* and the knowledge about the *work environments*. Team-specific shared understanding is concerned with the social facets of collaborations, being conceptualized as *cultural values*, *shared language* used in the communication, and *interpersonal characteristics*.

Objectives of IT: Preston and Karahanna (2009a) argue “that a ‘meeting of the minds’ of [IT] and [business] on IT value propositions is key to aligning an organization’s IS strategy and business strategy” (p. 1). The arising question is: what are the collaborating units trying to achieve by implementing the IS and do they target the same business value of IT? Reich and Benbasat (1996) subdivided this pursued value of IT into short-term and long-term objectives. While the short-term perspective relates to developing and running IT systems, the long-term perspective is concerned with a shared vision about the role of IT.

Role of IT: We found several studies that analyze shared understanding in terms of understanding of the role of IT. Ray et al. (2005) describe their concept of shared knowledge as “common understanding

between the IT and the line manager regarding how IT can be used to improve [business] process performance” (p. 630). Preston and Karahanna (2009b) define shared understanding as “understanding of how IS can be applied to enhance organizational capabilities.” (p. 162). In our study, we define the role of IT as shared understanding about the task-related roles, configurations, and potentials of the IT systems-in-use within the organization.

Work Environment: Nelson and Coopridge (1996) investigate the concept of shared knowledge through the understanding and appreciation among IT and business professionals for the others’ work environment (problems, task, roles, etc.), respectively. Cannon-Bowers and Salas (2001) categorize knowledge of the collaborative work environment by defining the shared task-specific understanding as knowledge of “specific procedures, sequences, actions and strategies necessary to perform a task” (p. 197). Further, they define task-related knowledge as “team members need to have common knowledge about task-related processes, but not necessarily to a single task” (p. 197). Whereas the first category focuses on the specific business and IT processes of the collaboration, the latter includes knowledge of industry-specific practices and guidelines.

Cultural Values: In our analysis, we noticed great interference between the concept of shared understanding of team-specific (or social) aspects and shared cultures. By analyzing shared occupational cultures, Rao and Ramachandran (2011) define occupational cultures as “ideas, beliefs, and values that guide the members of the occupation, primarily in their work environment.” (p. 582). Further, they describe business and IT units as two dispersed cultures which have to share common beliefs and ideologies to achieve an effective organizational culture. The advantages of (cognitive) shared values and beliefs on team performance have been discussed several times (Chua et al. 2012; Day 2007; Fisk et al. 2010).

Shared Language: Sun et al. (2012) define shared understanding as “an important instantiation of cognitive capital, represents the common codes, terms, and narratives used in the communication process” (p. 1199). In general, the focus should be on IT professionals when moving towards a shared language (Preston and Karahanna 2009b). By analyzing the “disconnected minds” between business and IT, Brennan (2008) found that not speaking the same technical language is the central indicator for a lack of understanding between business and IT.

Interpersonal Characteristics: Cannon-Bowers and Salas (2001) introduce another category of shared understanding which lies in the knowledge about the teammates characteristics. If one understands the preferences, strengths, weaknesses, and tendencies of the partner, they can maximize collaboration performance. The cognitive contribution of this determinant is “that over time team members learn the distribution of expertise within the team” (Cannon-Bowers and Salas, 2001, p. 197). When team members are very close they share an understanding for an effective allocation of individual tasks and responsibilities. The authors exemplify this optimal situation by a perfectly aligned basketball team. Each member knows the exact position of their partners in any situation. This shared understanding of interpersonal characteristics enables no-look passes where a player throws the ball to a teammate without even looking.

Methodology

In our literature review we seek for conceptualizations of B/IT-SU within the different research domains of strategic, project and operational collaborations. In our approach we followed the recommendations of Webster and Watson (2002). We applied a keyword search in the journals of the “Senior Scholars’ Basket” and in the conference proceedings of AMCIS, ECIS, HICSS and ICIS (years 1996 to 2014). We used the following keywords, each with both „mutual“ and „shared“ as prefix in separate searches, respectively: understanding; knowledge; cognition; mental models. The search was applied to the title, keywords, and abstract. Of the 280 papers, 153 applied the label “shared understanding” without any further description, and another 92 papers did not use the term in an business/IT collaboration context. Thus, we found 34 papers dealing with B/IT-SU. The relevant studies are selected based on an abstract screening. We identified studies that discussed the concept of shared understanding (and related concepts).

To complete our search we applied a forward and backward search using the Web of Knowledge (www.webofknowledge.com), revealing another 17 papers in which the concept of shared understanding is applied. Hence, our literature analysis is finally based on 51 papers dealing with B/IT-SU.

The subsequent coding process was conducted by the three authors, who are all experts in the area of IT alignment. First, all papers were analyzed in regard to if strategic, project and/or operational collaborations were studied. For example, papers that deal with collaborative strategic planning and decision-making, have been categorized within the strategic collaboration context. Papers that deal with some kind of project forms, like requirements engineering (e.g. Vranesic et al. 2011) or ISD implementation projects (e.g. Davis et al. 2009), have been classified within the project collaboration context. Furthermore, operational collaborations have been highlighted when the focus was on the operational workforce without the context of a specific project context, but dealing with the daily business of the workforce.

Second, the papers were analyzed in terms of the construct shared understanding and its applied dimensions. Thus, the next categorization was conducted focusing on the different B/IT-SU dimensions, like B/IT-SU of the objectives, cultural value, role of IT, etc. To finalize the coding, the authors discussed and merged the individual findings to one framework.

Findings

Contextual Situations in the B/IT-SU Research

In general, B/IT-SU becomes important in any contextual business/IT collaboration research. Thus, we found studies focusing on (1) strategic collaboration; (2) project collaboration; and (3) operational collaboration. The categorized papers are highlighted in Appendix A.

The largest number of studies (23) that comprise B/IT-SU was found in the area of *strategic collaboration*. As a critical determinant for strategic IT alignment, B/IT-SU has been analyzed between top managers, like CIOs senior business executives (Johnson and Lederer 2007; Karahanna and Preston 2013). Based on a short literature review, Zhao et al. (2009) define shared understanding as “the degree to which the CIO and [the Top Management Team] have a shared understanding regarding the role of ISS within the organization.” (p. 356).

We found 17 studies investigating B/IT-SU as crucial determinant in IT *project collaboration* success. Interview partners in these studies have typically been middle managers, like project managers (Yang et al. 2012), or general business and IT managers within an organizational division (Fisk et al. 2010). Commonly researched contexts within IS development are the steps of requirement development (Chakraborty et al. 2010; Holten et al. 2010; Tiwana et al. 2003) and system implementation (Pan and Mao 2013; Yang et al. 2012). IT projects are “challenging as people come to a project with diverse skills and backgrounds” (Chua et al. 2012, p. 577). Thus, intensive communication and information sharing are essential for quickly achieving a shared understanding of key objectives, making it an indispensable condition that IT professionals deeply understand the critical business needs and business professionals understand the possibilities and workflows in these IT projects.

The smallest group of studies (11) was identified for the *operational collaboration* context. By this we understand the daily collaboration between business and IT professionals, like service delivery, IT maintenance or small changes to IS. The small set of papers in this area is further limited because there are several papers which do not explicitly describe the collaborative context of their research situation. For example, Ray et al. (2005), Stoel and Muhanna (2012), and Nelson and Coopridge (1996) focus on line and IT managers’ understanding of the collaborative tasks and work environments. The authors do not define if the analysis took place in a project environment or focusing on the daily business operations. Other papers, like Rao and Ramachandran (2011), and Day (2007) mention both project and operational contexts, but do not clearly distinguish between these two forms. Nevertheless, we categorized the papers as operational collaborations because we found indications that the context is more operational than project-specific. As a study which explicitly focusses on operational collaborations, Wagner et al. (2014) have shed light to the mismatch between research on strategic IT alignment and daily business/IT collaboration. In their study, they highlight the importance of business and IT staff understanding each other, and that collaboration success is not only bound to the level of shared understanding between top managers. Consequently, they conclude that “alignment is not merely a strategic or executive-level issue, but that it is probably even more important at an operational level, in particular, when it comes to actual IT utilization and organizational performance in business operations.” (Wagner et al. 2014).

Shared Understanding in a Contextual Collaboration

In this section, we discuss the six dimensions of B/IT-SU from the perspectives of the different collaboration contexts – strategic, project and operational collaborations. The key results are highlighted in Figure 2.

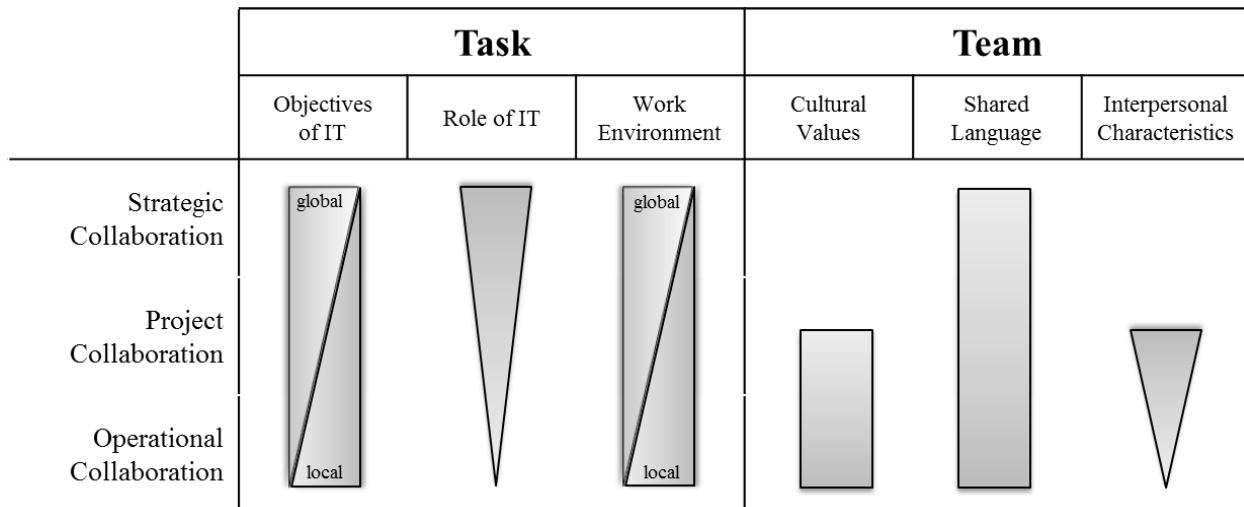


Figure 2. Contextual Shared Understanding
(width of the boxes represents the importance of the dimension)

Contextual B/IT-SU of the Objectives of IT

Reich and Benbasat (1996) investigate B/IT-SU from a strategic perspective. In their operationalization of alignment, they distinguish between “the degree of mutual understanding of current objectives (short-term alignment) and the congruence of IT vision (long-term alignment) between business and IT executives” (Reich and Benbasat 2000, p. 81). This widely acknowledged separation has been confirmed by Zhao et al. (2009): “Most of the authors identify two aspect[s] of shared understanding, namely short-term and long-term shared understanding.” (p. 1). Similarly to this distinction of short-term and long-term understanding, Johnson and Lederer (2007) introduce the understanding for the role of IT (current B/IT-SU) and the “shared views of the [...] future role of IT” (long-term B/IT-SU). The authors declare shared understanding of long-term objectives (shared vision) as being a critical determinant of a successful CIO/CEO relationship.

Moving down the hierarchical ladder, we distinguish between B/IT-SU of ‘global’ objectives and ‘local’ objectives (Tanriverdi 2006; Tiwana and Konsynski 2010). While top managers are primarily interested in organization-wide (global) objectives, the operational workforce focuses on local objectives. For example, the IT staff does not necessarily need to understand the global objectives of the organization to run or maintain the business systems. Similar findings have been made in the distinction of short-term and long-term objectives. We could not find any paper which analyzes shared understanding of long-term objectives in operational collaborations. Thus, we conclude that a shared vision may support a productive collaboration but is not a critical determinant of successful operational collaborations.

Within the context of project collaboration it depends on the specific project whether the objectives that need to be jointly understood tend to be global or local. Chua et al. (2012), for example, analyze complex projects that are highly aligned to the business strategy and thus focus on global objectives. On the other hand, we found several studies that exclusively focus on projects in single divisions and do not discuss global or organization-wide objectives (Charaf et al. 2013; Rosenkranz et al. 2013; Vranesic et al. 2011). These researchers identify the necessity of a shared understanding of the business needs or objectives in the specific (local) “application domain”. Thus, we derive that project collaborations tend to include B/IT-SU of global and local objectives whereas the emphasis depends on the specific project form.

Contextual B/IT-SU of Role of IT

Shared understanding of the role of IT addresses the question of “how to employ IT resources to support the organization’s strategy” (Johnson and Lederer 2007, p. 85). This definition exhibits the interdependences of the role of IT and the organization’s objectives. While B/IT-SU of objectives deals with the question of what the partners want to achieve in their collaboration, the dimension of the role of IT addresses the question of *how* they intend to achieve these objectives through the support of IT. To evaluate the shared understanding for the role of IT in strategic collaborations, researchers determine the perceived productivity of IT (Preston and Karahanna 2009b), or the consequences of an IT breakdown (Johnson and Lederer 2007). Thus, research has concentrated mainly on perceived IT business value rather than the actual value adding employment plan of IT systems.

Nevertheless, this dimension becomes critical in the planning and decision making process of strategic collaborations. By shifting the perspective from a pure strategic collaboration to a project collaboration, the role of IT dimension highlights the question of how to employ IT to improve business process performance (Ray et al. 2005). This shared understanding for the value adding implementation of the system is bound to the specific project or division in which it takes place. Lahdelma (2010) found that “the role of IT can differ depending on the department” (p. 8). Hence, findings of one division or one hierarchical layer may not be simply transferred to other divisions or hierarchical layers, thus supporting our assumptions of the changing nature of B/IT-SU.

Consequently, because IT investments highly depend on strategic decisions and the perceived IT potentials of and by the top management team, shared understanding for the role of IT plays a crucial role in strategic collaborations. On the project level this type of understanding refers to the congruence of how to employ a value adding system and, thus, it is critical to the success of the collaborative project. Because employees at operational level generally work on existing systems, we argue that the shared understanding for the role of IT at this level is not as crucial as on other organizational layers. The reason is that once an IS is implemented and running, the general role of IT is not of utmost importance to employees working at operational level, as long as the systems are used as intended.

Contextual B/IT-SU of Work Environment

The shared understanding of the work environment includes the understanding for problems, tasks and roles that are related to the workspace (Nelson and Coopridge 1996). Similar to the dimension ‘B/IT-SU of Objectives’ we distinguish between global and local B/IT-SU of work environment. By shared understanding of the global work environment we mean both organization-specific and industry-specific practices, traditions and rules. Understanding of the local work environment on the other hand focuses on specific operational processes and tasks within the work environments.

To measure shared understanding, Reich & Benbasat (2000) determined both the individuals’ industry experience and managerial experience. Others have asked explicitly for the knowledge about industry practices, firm’s competitors, and overall strategies (Preston and Karahanna 2009b). Thus, analyses of the work environment in strategic collaborations focus on a high-level understanding of the firm’s environment.

At the project collaboration level, we need to distinguish between projects addressing single business processes, like requirements development for process improvements (Chakraborty et al. 2010; Holten et al. 2010), vs. large-scale IS implementations affecting the whole organization (Chua et al. 2012; Fisk et al. 2010; Tiwana et al. 2003). Since large, complex IS projects span various organizational functions and related processes, a higher level of shared understanding of the work environment is needed. Furthermore, a shared understanding of the external environment, like industry practices (Chua et al. 2012) or regulatory constraints (Pan and Mao 2013), has to be established due to regulatory issues and competitive aspects, which can be manifold in cross-functional projects. On the other hand, the partners need to understand the local business problems and requirements as well as IT development and implementation processes.

The last collaboration form of operational service delivery and maintenance includes understanding of the local work environment. A common example within this context of collaboration is a programmer who compiles source code based on a detailed description. The programmer does not need to understand the

behavior of competitors, or industry practices, but should understand the specific process part for which the source code is compiled. We found evidence that partners should understand the procedures, roles and problems within an operational collaboration (Day 2007; Nelson and Coopridge 1996; Wagner et al. 2014).

Contextual B/IT-SU of Cultural Values

Research on strategic collaborations stays widely silent when it comes to occupational cultural values between business and IT. Even though Reich and Benbasat (2000) adopt the description of “culture gaps” (p. 83) in their discussion on social alignment, they do not discuss the meaning of culture in detail. We argue that there already exists a “business culture” at top management level, for which reason different (occupational) cultural values are not predominant.

Different findings have been made for project and operational collaborations. In both domains we found studies – three in the project domain (Brennan 2008; Chua et al. 2012; Yang et al. 2012) and two in the operational domain (Day 2007; Rao and Ramachandran 2011) – which highlight the importance of a shared culture for successful collaboration. Thus, Chua et al. (2012) identify shared values and beliefs as crucial factors for an aligned project group and to be an enabler for successful clan control in complex IT projects. Similar findings have been made by Yang et al. (2012) who highlight the importance of organizational cultures in IT projects because of the “rapidly changing world [in which] business success is more frequently achieved through collaboration of organizations.” (p. 2).

In the discussion of cultural values in operational collaborations, Rao and Ramachandran (2011) investigate the collaboration between business and IT staff applying nine dimensions of occupational cultures. The authors do not distinguish between general operations and smaller ISD projects, but highlight the importance for shared cultural values in both collaborations. Thus, we summarize a high importance for a shared understanding of the occupational (i.e., not national) cultural values and beliefs in project and operational collaborations.

Contextual B/IT-SU of Shared Language

Because language is the main component of any communication it is necessary to share an understanding for the applied language independent of hierarchical layers. Research studies in all three domains widely acknowledge that it is up to the IT professionals to understand and speak the business language.

Preston and Karahanna (2009a) have investigated shared language and argue that “business executives have complained that their CIOs lack the ability to speak in the “language of business” and tend to use technical jargon that is not readily understood by those outside the IT domain.” (Preston and Karahanna 2009a, p. 3).

Regarding project collaboration, researchers have argued that the quality and intensity of communication in development projects and especially in requirement development processes are the critical success factors (Rosenkranz et al. 2013; Vranesic et al. 2011; Yang et al. 2012). Thus, shared language can be seen as a driver for qualitative communication (Brennan 2008), and in turn project success.

Looking at B/IT-SU in operational collaborations, we found two papers which address the importance of shared language in the collaboration. While Wagner et al. (2014) describe a common language as an enabler for the understanding of the business work environment, Day (2007) identifies the usage of language as a reflection of the harmony in the relationship.

In summary, shared language between business and IT is important on all hierarchical layers, since the use of different terms and vocabulary can lead to misunderstandings and unintended conflicts. We assume a relatively high importance of shared language in the context of project collaborations because this collaboration context highly relies on the success of communication processes.

Contextual B/IT-SU of Interpersonal Characteristics

Even though Reich and Benbasat (2000) have called for further discussions on the *social* dimension of alignment, we did not find papers which discuss the meaning of shared understanding between business and IT on an interpersonal level. Most research analyzes either the collaborative task, objectives, or the

language-in-use. Only one study analyzes shared understanding within one IT unit (e.g., there is no business professional involved) and defines shared understanding as “the degree of shared cognition’ between two subunits regarding their respective roles and responsibilities within the IT unit” (Dhaliwal et al. 2011).

Interestingly, a large number of studies on shared understanding exists in related research domains, like coordination in virtual teams (Caya et al. 2008; Thomas and Bostrom 2007). Thus, the conceptualization as shown in the theoretical background section is mainly based on these works (e.g. Cannon-Bowers and Salas 2001) as well as on the discussion in virtual team coordination.

Since shared understanding is mainly discussed in regard to closely collaborating teams, we expect the dimension of interpersonal characteristics as being especially important in project collaborations where partners need to interact and adjust on a daily basis. Thus, the metaphor of the perfectly aligned basketball team becomes crucial for ISD teams. Further, we expect a minor importance of interpersonal characteristics for shared understanding in operational collaborations. Although the partners need to collaborate closely and usually on a daily basis, the tasks and responsibilities are significantly more clearly defined.

Contributions, Limitations and Further Research

Business/IT shared understanding has been shown to significantly influence IT alignment and, thus, the success of IS strategy planning and implementation (Reich and Benbasat 2000; Preston & Karahanna 2009; Tan and Gallupe 2006). However, research on B/IT-SU is fragmented and has to date failed to come up with a consistent conceptualization that can be applied at different organizational levels and contexts (Jentsch and Beimborn 2014). In our analysis of B/IT-SU we highlight the varying importance and meaning of the single B/IT-SU dimensions within the respective contextual collaborations. We show that the importance of the B/IT-SU dimensions changes with shifting the focus from top management level (strategic collaboration) to middle management (project collaboration) and to business and IT staff (operational collaboration). By integrating and extending previous research on B/IT-SU which, in general, had a dominant focus on the strategic level and did not consider different organizational layers conjointly, we provide new insights into this important issue of business/IT collaborations. We adopted and proved the idea of Wagner et al. (2014) who claimed “that alignment is not merely a strategic or executive-level issue, but that it is probably even more important at an operational level, in particular, when it comes to actual IT utilization and organizational performance in business operations”. Thus, in our research we applied findings from previous studies and assembled them to one enterprise-wide picture of B/IT-SU.

The following limitations need to be considered when interpreting our results. First, our literature review is limited in regard to publication outlets and time. However, given the comparatively large number of initial papers as well as the number of those used in the analysis, we can assume to have covered the majority of studies relevant to our research. Second, the six dimensions and three collaboration contexts of B/IT-SU are intended to serve as a first step towards an integrated concept of B/IT-SU that can inform future research and, of course, needs to be empirically validated. In order to do so, we are conducting a series of case studies in which the B/IT-SU dimensions, their conceptualizations, and their importance in different collaboration contexts will be analyzed. The goal is to improve our understanding of B/IT-SU in its various facets, and help academics and practitioners alike to increase the effectiveness of B/IT-SU analyses. Subsequently, it might be possible to better choose, orchestrate, and implement mechanisms to achieve and sustain sufficient levels of overall B/IT-SU.

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APPENDIX

Collaboration form	Sources
Strategic Collaboration	(Antikainen and Pekkola 2009; Chan et al. 2006; Cohen and Toleman 2006; Cybulski and Lukaitis 2005; Jeffers et al. 2008; Joachim et al. 2011; Johnson and Lederer 2005; Johnson and Lederer 2007; Johnson and Lederer 2010; Karahanna and Preston 2013; Lahdelma 2010; Nagle and Golden 2009; Park et al. 2010; Preston and Karahanna 2004; Preston and Karahanna 2009a; Preston and Karahanna 2009b; Preston et al. 2006; Ranganathan and Sethi 2002; Reich and Benbasat 1996; Reich and Benbasat 2000; Tan and Gallupe 2006; Vermerris et al. 2013; Zhao et al. 2009)
Project Collaboration	(Ajjan 2009; Blumenberg et al. 2009; Chakraborty et al. 2010; Charaf et al. 2010; Charaf et al. 2013; Chua et al. 2012; Davis et al. 2009; Fisk et al. 2010; Holten et al. 2010; Pan and Mao 2013; Rosenkranz et al. 2010; Sun et al. 2012; Tiwana 2012; Tiwana et al. 2003; van den Hooff and de Winter 2011; Vranesic et al. 2011; Yang et al. 2012)
Operational Collaboration	(Beimbom 2012; Beimbom et al. 2007; Day 2007; Nelson and Coopridier 1996; Rao and Ramachandran 2011; Ray et al. 2005; Stoel and Muhanna 2012; Subramani et al. 1999; Wagner et al. 2010; Wagner et al. 2010; Wagner et al. 2014; Wagner and Weitzel 2012)

Table 1. Results of the Literature Review on B/IT-SU