

Value Co-creation in Knowledge-Intensive Business Services

A multiple case study of how service providers solve inhibitors

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Abstract

Background/Purpose - Specialization, knowledge intensiveness, and technological complexity is growing in many industries, which creates unique opportunities for business transformation. Yet, firms lack competence and ability to exploit these alone, and engage Knowledge-Intensive Business Services (KIBS), i.e. consultancies. The collaborative process between consultancy and client has got increased attention the recent years, referred to as Value Co-Creation (VCC). Due to the inherent asymmetry between the parties knowledge bases this process often pose special challenges which needs to be managed to increase the chance of success. The purpose is thereby to advance theory on how inhibitors that strain VCC in KIBS engagements can be managed by the service provider to facilitate successful collaborations.

Design/Methodology/Approach - This research adapts towards interpretivism and an abductive approach by using a qualitative mono-method. A multiple case study is conducted through ten semi-structured interviews with representatives from two firms that work with new technology development.

Findings - The VCC process in the two cases consist of five collaborative activities with three essential components; trust, iterative process, and interdisciplinarity. This lay the foundation for the collaborative process where one has identified eight inhibitors to occur, which can be managed by the consultancy with five fundamental and overarching strategies.

Practical implications - The results of the study provide managers and other actors with an overview of potential inhibitors that can occur in the VCC process, which can increase awareness around which hurdles that are important to manage. In addition, it provides practical examples and overarching strategies that are fundamental to use in conjunction by the service provider. The strategies can also guide the client towards a beneficial behavior.

Originality/Value - This study provides an initial understanding into how the hurdles that may strain VCC are handled by proposing fundamental strategies that are important for a successful collaboration. The findings identify implications that benefit both service provider and service buyer in several ways. This research can possibly guide and stimulate future research in this field, and a number of areas are suggested.

Keywords - Value Co-creation, VCC, Business-to-business, B2B, Customer Relationships, Knowledge-Intensive Business Services, KIBS, Technology-based Services, Inhibitors; Challenges; Barriers, Supplier Strategies, Value-in-use, Service-Dominant Logic, Qualitative Research

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Picture on front page taken from Global Focus – The EFMD Business Magazine (2018)

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1.0 Introduction

In today's competitive and saturated business environment, new products and services are introduced to the marketplace in an increasingly rapid fashion and customers can almost choose infinitely between products and services (Markovic & Bagherzadeh, 2018). At the same time specialization, knowledge intensiveness, and technological complexity is growing in many industries (e.g. Jacob & Ulaga, 2008; Miles, Belousova & Chichkanov, 2018; Möller, 2006), creating fundamentally new opportunities for business transformation (Prahalad & Ramaswamy, 2004), but also forcing providers and consumers to get more dependent on each other's knowledge and resources (Tuli, Kohli & Bharadwaj, 2007). Hence, in the more networked business environment, firms that aim for profitable growth and a competitive advantage need to generate relevant innovations and are thereby advised to look beyond their boundaries (Sood & Tellis, 2005).

Knowledge-Intensive Business Services (KIBS) have gained increased importance and attention the last 25 years (Hu, Lin, & Chang, 2013; Lessard & Yu, 2012), and describes a group of firms that provide both private and public actors with knowledge-intensive inputs with the aim of improvement either for the client themselves or other actors in the client's network, e.g. their end customer (Lessard, 2014b; Müller & Doloreux, 2009; Zolkiewski et al., 2017). Their employees are generally referred to as consultants (Hu et al., 2013), and the firms can be considered as both facilitators, carriers, and sources of innovation (Den Hertog, 2000). Thus, KIBS contribute to economic growth and performance in society as they innovate both externally and internally by helping other organization improve their innovation capabilities, productivity, and performance, while simultaneously innovating in-house (Doloreux, Freel & Shearmur, 2010). They are also recognized as an essential source of employment growth in industrial economies (Lessard, 2014b; Müller & Doloreux, 2009), and according to the United Nations industry classification system, ISIC (United Nations, 2008), KIBS and other professional services contributed with a value-added from services in the European Union, adding more than 750 million Euros in 2016 (OECD, 2016).

Organizations engage KIBS as they need external competence to solve various issues, which either is impossible or inefficient to solve by using internal resources alone (Aarikka-Stenroos & Jaakkola, 2012). KIBS' primary value-added activities can therefore be described to include gathering, creation, and dispersion of knowledge with the aim of developing customized services or products to satisfy

client's needs (Bettencourt, Ostrom, Brown & Roundtree, 2002; Müller & Doloreux, 2009). Hence, the delivered service often involves changing the state of people, artifacts, or information and knowledge, and consultants often experience that the clients have diverse knowledge and experience with the problem to be solved and the ways they are working. Overall, Miles (2005) summarizes research within the field as such; *‘In many ways, what they are doing is locating, developing, combining and applying various types of generic knowledge about technologies and application to the local and specific problems, issues and contexts of their clients. They are involved in a process of using generic and local knowledge together’* (p. 45).

Over the recent decade, KIBS have received attention from scholars in various disciplines and most studies emphasize vital aspects of their economic organization, their dynamics, and their competitive strategies in the globalized economy (Doloreux et al., 2010). Accordingly, the literature on the domain stress the central role of innovation, both in relation to technology and in combination with soft skills, as well as the importance of knowledge, performance, and the process (e.g. Amara, Landry & Doloreux, 2009; Breidbach & Maglio, 2016; Lessard & Okakwu, 2016; Müller & Doloreux, 2009; Miles et al., 2018; Santos & Spring, 2015; Scarso, 2015). However, existing research mainly target KIBS as a firm or sector, rather than the service or relationship that they provide, i.e. a secondary focus on the actual activities that the firm perform. KIBS interact and innovate in various ways as their knowledge bases and behaviors are rather heterogeneous (Miles et al., 2018). Research also reveal that the success of the process depends on the relationship between the provider, the client, and the interactions between them and other actors (Powers, Sheng & Li, 2016). A fundamental factor in achieving the highest value outcomes of external competence is therefore customer participation and involvement (Kukk, Leppiman & Pohjola, 2014; Mustak, 2018), and an area of research that have received growing attention in regard to this collaboration is the concept of co-creation (e.g. Kukk, Leppiman & Pohjola, 2014; LaPlaca & Lindgreen, 2016; Lessard & Okakwu, 2016; Prahalad & Ramaswamy, 2004).

The popularization of the term *co-creation* is credited Prahalad & Ramaswamy (2004), as a response to the increasingly networked society where the customer and their experience is at the core of the delivery. *Co-creation* is used across multiple disciplines, referring to practices where value propositions, i.e. a promise of reciprocal value between organizations and their customers, are transformed by collaborating, interacting, and sharing resources with multiple stakeholders

(Kowalkowski, 2011; Rill & Hämäläinen, 2018). It thereby appears as an overarching construct highlighting the importance of relational orientation and interaction, hence shaping service ecosystems (Marcos-Cuevas, Nätti, Palo & Baumann, 2016; LaPlaca & Lindgreen, 2016). KIBS engagements is due to the interactive nature of the problem-solving process considered an example of co-creation, as the parties are contingent on each other's knowledge and resources to create value propositions (Bettencourt et al., 2002). Consequently, this process is mainly known as *value co-creation* (VCC) (e.g. Aarikka-Stenroos & Jaakkola, 2012; Jaakkola and Häkänen, 2013; Lessard, 2014a 2014b; Lessard, 2015; Mustak, 2018).

VCC has received growing interest from academics and practitioners the recent decade and refers to various collaborative concepts, e.g. co-design, co-participation, and co-development (Prahalad & Ramaswamy, 2004; Ranjan & Read, 2016). The prefix '*co*' implies an active role from various actors, and indicates shared work within dyadic relationships, multilateral networks, and ecosystems, which are particularly salient in B2B relationships (Kohtamäki & Rajala, 2016). VCC is prevalent in KIBS engagements as clients not only buy a solution, but rather a process of collaborative activities. Researchers emphasize that this can be considered an all-encompassing process, where all stakeholders play a crucial role for service success acting as 'co-creators' and 'resources' by giving ongoing feedback on their expectations, needs, and preferences, rather than acting as 'recipients' of the offering (Bettencourt et al., 2002; Kukk et al., 2014, Kukk, 2016; Grönroos, 2011). The process can also be characterized as highly unstructured, dynamic, and complex as the outputs is disseminated and gathered across organizational boundaries (Bettencourt et al., 2002; Stucky, Cefkin, Rankin, Shaw & Thomas, 2011).

However, one observes that there are few empirical examples of how firms interact and exchange in VCC, and there is limited knowledge on the methods and processes that organizations use. Further, there are few managerial guidelines on how VCC can be structured and managed (e.g. Aarikka-Stenroos & Jaakkola, 2012). Thus, as the collaborative partnership between provider and client is highly dynamic and complex it poses unique challenges and high uncertainty (Aarikka-Stenroos & Jaakkola, 2012), and successful VCC is thereby not guaranteed in every instance (Grönroos, 2011). Even though it exists literature on both value creating and value destructing outcomes to VCC (e.g. Järvi, Kähkönen & Torvinen, 2018), related research tends to reveal positive outcomes (e.g. Lambert & Enz, 2012). Thus, it appears a need to identify how KIBS handle potential challenges or inhibitors

occurring throughout the VCC process, i.e. answering Durugbo and Schwetschke (2018) call for *“research targeted at identifying whether and what hurdles may strain co-creation in B2B relationships and how they could be avoided or managed”* (p. 278), in order to work towards successful VCC processes.

1.1 Scope, Problem Formulation, and Objective

Even though studies on co-creation of value propositions are emerging, there is limited body of work illustrating VCC in practice in the context of KIBS (Aarikka-Stenroos & Jaakkola, 2012; LaPlaca & Lindgreen, 2016; Marcos-Cuevas et al., 2016). Research show that in relation to VCC in KIBS the process is as important as the content, as the performance of KIBS engagements is contingent on the party's ability to co-create value (Spohrer & Maglio, 2008). Consequently, the way the parties communicate, collaborate, align, and interact form the basis for VCC (Ballantyne & Varey, 2006). Lessard and Okakwu (2016) also emphasize that consultants need to avoid inhibiting factors in the relationship to heighten the chance of success. Insufficient management of the relationship can thereby strain VCC and can lead to interruption of resource exchanges among actors in the network (Breidbach, Kolb & Srinivasan, 2013). Thereby, as VCC appears to be highly dynamic and complex in KIBS engagements, there is no guarantee that the collaboration between the actors is value creating, as it can occur challenges along the way which may hurdle the VCC process (Aarikka-Stenroos & Jaakkola, 2012).

Yet, there is a low amount of research emphasizing the negative aspects that may occurs through the management of the relationship during VCC (e.g. Durugbo & Schwetschke, 2018), and there is lack of practical advices on how actors approach the challenges that occur during VCC (e.g. Aarikka-Stenroos & Jaakkola, 2012; Frow, Neonen, Payne & Storbacka, 2015; Kukk et al., 2014). Moreover, few studies explore which strategies to use when an inhibitor occur (e.g. Malshe & Friend, 2018), and researchers have highlighted the need to obtain better understanding of how collaborations arranged as projects can manage VCC successfully (Markovic, Bagherzadeh, Vanhaverbeke & Bogers, 2018). It also becomes evident that every challenge that occur during VCC might change the nature for the next iteration, thus determining value creation (Vargo & Lusch, 2011). Hence, this research aims to contribute to the understanding of how KIBS providers can manage situations where

challenges occur in order to ensure success, subsequently, posing the following research question (RQ):

How can the inhibitors that strain value co-creation in knowledge-intensive business services be managed by the service provider to facilitate successful collaborations?

In order to answer this RQ, the researchers first need to explore which inhibitors that occur during VCC, before looking into how they are responded to. The study thereby seeks to shed light on the VCC process between KIBS and client with the aim of identifying and exploring how the potential challenges that occur during VCC are managed by the service provider, in two cases; Company A and Company B. Accordingly, one look into KIBS literature, and literature on co-creation of value propositions, which results in a conceptual model that can complement the current research on VCC in the domain of KIBS. The research thereby aims at providing managers in KIBS engagements with valuable and practical guidelines into how different situations can be approached. Hence, the final model aspires to support both consultants, client, and other actors involved in the process by increasing their understanding of how one could monitor the performance of the VCC process.

This research uses the words *challenge*, *inhibitor*, *problem*, *barrier*, *hurdle*, and *hinder* interchangeably to describe substances that reduce or suppress the VCC process. In this research, it does not refer to failed interaction processes that already have resulted in a decline in well-being or negative outcomes, but rather factors that can challenge the collaboration towards a negative end. This implies that these hindrances can impact both the relationship between the actors, as well as the final solution. Further, *strategies* and *responses* refer to the way practitioners within the organizations choose to approach and handle the various barriers that occur during VCC and is chosen as it is most frequently used in previous research where one look at related topics (e.g. Malshe & Friend, 2018). Moreover, *successful collaboration* in the VCC process is defined in relation to the interactions and relationship between the parties (Powers et al., 2016; Santos & Spring, 2015). One also adopts towards Spohrer and Maglio (2008) which state that the performance of KIBS engagements is contingent on the ability to co-create value, and that one through avoiding hurdles can increase the chance of success (Lessard & Okakwu, 2016). Thereby, not focusing on the whether the specific outcomes of the process are successful. The research uses the terms *KIBS*, *consultancy*, *provider*,

supplier, or *service provider* at an interchangeable basis to refer to the supplier perspective. While referring to *customer*, *client*, *beneficiary*, or *service buyer* at the other side.

Hence, the paper does not explore what specific value KIBS and their clients create together, what the actors define as a successful solution, nor how they reach a successful outcome. One rather looks at how the supplier can increase the chance of success in the VCC process through various strategies. In this regard, one does not investigate the possible outcomes of the responses and their effect on the VCC process. Further, one does not consider the relationship history between the actors or when the hurdles occur. Nonetheless, the paper solely examines supplier strategies to manage or avoid inhibitors, hence not looking into which responses other actors in the network use, e.g. client.

1.2 Structure of the Paper

This paper attempt to provide the reader with a comprehensive understanding of which challenges that can occur in the KIBS-client relationship in VCC, and strategies that are used to approach them. In section two the authors review an extant amount of literature to give the reader an overview of KIBS, VCC, and the inhibitors and strategies that currently are identified in literature. The third part aims at providing a lens of analyzing the RQ, resulting in a conceptual model that have guided the researchers through the process. The conceptual model is based on frameworks which the authors believe can help answer the RQ, and later provide managers with valuable recommendations. Fourthly, one presents the methodological considerations. Additionally, section five presents the reader to the analysis of the data collected. Part six aims at answering the RQ by presenting a discussion, and a revision of the conceptual model. The seventh section provides the reader with the theoretical and managerial implications of the findings, as well as identified limitations within the current research and suggest topics and directions that are interesting to explore further. The last section contains some concluding remarks.

2.0 Literature Background

This chapter aims at providing a deeper understanding of the research context, by introducing relevant theories and concepts within the field of KIBS and VCC, as well as it examines which inhibitors and strategies for VCC that formerly are discussed in literature. The literature is mainly found in the databases of Scopus and Business Source Complete between January 16th and February 25th, 2019, where the researchers searched for specific keywords in article title, abstract, and keywords (Table 1). The authors initially started by looking into co-creation in business-to-business (B2B) relationships, before one narrowed down the scope to KIBS and VCC.

Table 1: Overview of Literature Search

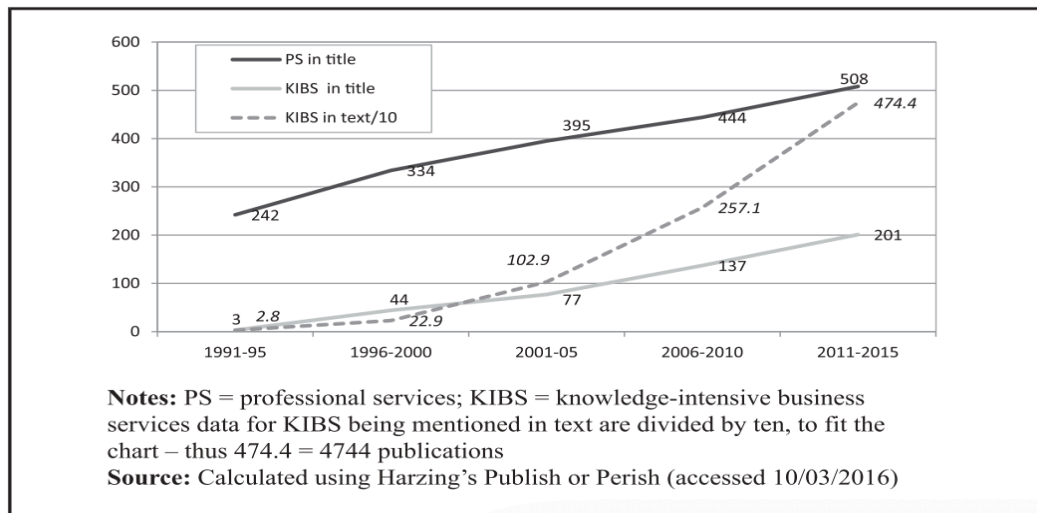
Search Words	Scopus	Business Source Complete
"Business-to-business" + "Co-creation"	90	103
"B2B" + "Co-creation"	87	90
"Knowledge-Intensive Business Services"	570	289
"KIBS"	584	247
"Knowledge-Intensive Business Services" + "Co-creation"	20	10
"KIBS" + "Co-creation"	16	10
"Knowledge-Intensive Business Services" + "Value Co-creation"	11	8
"KIBS" + "Value Co-creation"	8	6
"KIBS" + "Value Co-creation" + "Inhibitor; Barrier; Challenge"	0	0
"Co-creation" + "Inhibitor"	6	4

Note. Created by the authors (2019)

2.1 Knowledge-Intensive Business Services

KIBS were first recognized as important facilitators for economic evolution in the 1970's (Doloreux et al., 2010; Hu et al., 2013; Lessard & Yu, 2012). Until the middle of the 1990's they were mainly referred to as 'business services' or 'consultancy' (Wood, Bryson & Keeble, 1993), before the terminology '*knowledge-intensive business services*' appeared in a publication (Miles et al., 1995). Since then, one has observed a growing interest in the topic from multiple disciplines (Figure 1) (Miles et al., 2018), especially in relation to service innovation which Scarso (2015) found to be the most frequently examined topic in relation to KIBS. Yet, there still exist research which examines consultancies as professional services.

Figure 1: Publications with ‘Professional Services’ or ‘Knowledge-Intensive Business Services’



Note. Adapted from Miles et al. (2018)

There is no standard approach for defining KIBS, but rather a consensus created by scholars and practitioners within the field. Toivonen (2006) define KIBS as “*expert companies that provide services to other companies and organizations*” (p. 2), while a more thoroughly definition was proposed by Den Hertog (2000) saying that KIBS are “*private companies or organizations that rely heavily on professional knowledge, i.e. knowledge or expertise related to specific (technical) discipline or (technical) functional-domain to supply intermediate products and services that are knowledge based.*” (p.505) As such, these definitions combined refer to KIBS as service firms that typically help other organizations deal with problems by delivering customized solutions of high knowledge intensity; services that are predominantly non-routine (Bettencourt et al., 2002). Moreover, as the services KIBS deliver rest upon various kinds of specialist knowledge, Miles et al. (1995) advocate a working definition distinguishing between ‘traditional professional services’ (P-KIBS) and ‘new-technology-based services’ (T-KIBS), as shown in Table 2. P-KIBS typically help their client navigate complex systems of a social, physical, or psychological character. T-KIBS, on the other hand, sell technical knowledge that most customers do not have (Kristensson et al. 2008; Nambisan & Nambisan 2008). As a result, they work with development, production, and transfer of knowledge related to new technological service solutions, which involves both management consultancy and specific information technology services. As the society is becoming increasingly technology-driven, one observes a growing demand for services delivered by T-KIBS as organizations often need knowledge of multiple technical domains to operate (Miles et al., 2018).

Table 2: Types of KIBS

P-KIBS	T-KIBS
Marketing	Software Development
Design	Technical Services
Advertising	Telematics
Financial Services	New Technologies
Accounting	Computer Networks
Architecture	Research & Development
Medical Services	Consulting in Information Technology
Engineering	Consulting in Research & Development
Training	
Consulting	

Note. Created by the authors, adapted from Miles et al. (1995, p.29-30)

Further, it is interesting to understand how this type of companies distinguish from other B2B services. Firstly, KIBS' services are characterized by a highly intellectual added value, where the main object of exchange is the supplier's specialist knowledge (Müller, 2001). Employees use their knowledge and experience to provide customers with a perspective based on their experience of what has worked before and the opportunities ahead. Hence, the service relies heavily on the expert employees' ability to provide knowledge-based solutions to their clients, and the service can be described as rather intangible and vague (e.g. Aarikka-Stenroos & Jaakkola, 2012; Bettencourt et al., 2002; Løwendahl, 2005). Moreover, the service has a more relational than transactional nature, as the service process not is limited to the dyadic relationship, but rather consists of mutual interaction processes between the supplier, customer, and other generic actors (Müller & Doloreux, 2009). Research thereby stress that value appears through the interactional process between multiple stakeholders, and not through direct use of the service or good. (Ballantyne & Varey, 2006; Grönroos 2011). This indicates that KIBS in many cases contrasts the analytical, economic logic of business by emphasizing the human experience as a starting point for the joint problem-solving process (Rill & Hämäläinen, 2018).

2.1.1 Importance of Knowledge

Knowledge can be considered at the core of innovations and as a fundamental operant resource that can enable organizations to combine information in new ways (Lessard, 2014b). According to

Antonelli (1999), KIBS emerged as a response to the increased appropriation for knowledge, where one saw that institutions could specialize within the ‘knowledge field’. This resulted in an evolution where KIBS no longer were seen as suppliers or transferors of information-based services but rather recognized for providing knowledge-driven services where employees combine specialized knowledge with the local context of the clients to produce customized solutions (Müller & Doloreux, 2009). Consequently, KIBS can be considered an interface in the problem-solving process where one uses and build knowledge as primary component of the value creation process (Lemus-Aguilar & Hidalgo, 2015; Kukkk, 2016).

KIBS value output heavily rely on operant resources, i.e. knowledge and skills that are intangible and hard for the person to explain, and thereby differs from manufacturing firms that mainly produce outputs that can be codified (Hu et al., 2013; Müller & Doloreux, 2009). However, it is emphasized that both tacit and explicit forms of knowledge are important in the problem-solving interactions that take place between the actors (Den Hertog, 2000; Kohtamäki & Partanen, 2016; Larsen, 2001). Explicit knowledge can be accessed, verbalized, and articulated into a tangible form, and include knowledge that can be separated from both individual and social value systems. Tacit knowledge, on the other hand, often consist of personal, subjective, or experience-based knowledge, making it difficult to codify the knowledge due to its context-specific and inexpressible nature (Hislop, 2013). Accordingly, *“KIBS can trigger and strengthen processes of knowledge conversation in clients. They can provide new knowledge certainly, but they may also act as catalysts, which help internal communication and knowledge conversation”* (Den Hertog, p.511), thus facilitating co-creation of new knowledge. Additionally, it is important to highlight that the organization’s knowledge base not just is a sum of the internally available resources, but also constitutes the communities where KIBS’ employees interact with internal and external actors. Accordingly, Larsen (2001) finds that the knowledge in consultancies is situated in many different projects and among the actors, where *“no single actor could possibly know it all.”* (p.84).

2.1.2 Importance of Relationships

There is no single definition of relationships in the B2B-market; they can range from simple, short-term, and standardized, to collaborative and long-term relationships (Heikka & Nätti, 2018). Müller and Doloreux (2009) argues that it is essential to understand the relationship between the actors to

gain both a theoretical and empirical understanding of how they interact, which is particularly important for KIBS due to their relational nature. In this regard, Martinez-Fernandez and Miles (2006) suggests that there are two main forms of relationships a service company can have with a customer; ‘jobbing’ and ‘sparring’. The first involves cases with minimal interaction after the initial expression of requirements as the client provides the supplier with specifications and often pre-order an already defined solution. The latter refers to the relationship between KIBS, their customers, and other actors, as the information exchange between the actors take place at a continuous basis in a collaborative problem-solving process (Zieba & Pawel, 2017). ‘Sparring’ relationships helps facilitating sharing and integration of knowledge and information, and thereby makes it easier to form mutual value propositions as the process gets more fluid and continuous during the relationship (Heikka & Nätti, 2018). This is in line with the study of Kowalkowski, Ridell, Rödell, and Sörhammar (2012), who found that long-term collaborations make actors more open to actively participate in joint learning and innovation activities, while clients in shorter collaborations can be reluctant to enter into a close relationship with the provider. Thus, customers tend to choose service providers that they have experience with from before, in order to build and maintain fruitful relationships, and most projects are thereby not a one-off experience (Bettencourt et al. 2002). Heikka and Nätti (2018) also reveal that there are differences in VCC depending on the length of the relationship, where short-term projects are less debated and co-created between the actors compared to projects of a longer length. Thus, supporting Kowalkowski (2011) which stated that the value propositions created should mirror the history and length of the partnership between KIBS and the client.

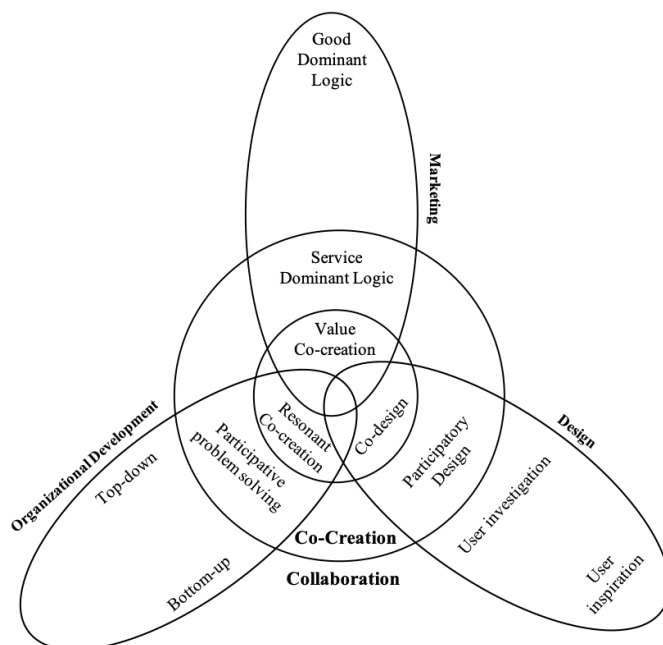
Another interesting viewpoint is the essential role of individual experts in KIBS engagements, where Heikka and Nätti (2018) argue that experts can influence the evolution of the relationship through creation of trust, and thereby influence how the value proposition evolve, i.e. the VCC process. The authors also emphasize the importance of personal relationships due to the abstract nature of KIBS’ services which makes the customer more reliant on professionals. Building on this notion, many scholars highlight the importance of goodwill and trust for engagement, especially when there is a high level of collaboration, such as in VCC (e.g. Chen, Tsou & Ching, 2011; Sarker, Sarker, Sahayum & Bjørn-Andersen, 2012). Franklin and Marshall (2018) examine trust as a fundamental building block for VCC in B2B relationships, and other scholars state that a high degree of VCC facilitate higher levels of trust. Thus, one observes that trust increase the willingness of customers to actively engage in VCC activities (Kukk et al., 2014). Trust thereby supports open sharing, knowledge

renewal, and honest dialogue in the collaboration (e.g. Bettencourt et al., 2002), and becomes both an essential precondition and outcome of VCC (Franklin & Marshall, 2018; Følstad, 2017; Scarso & Bolisani, 2011, 2012). However, research by Zieba and Pawel (2017) and Edvardsson, Holmlund and Strandvik (2008) contradicts this by stating that trust only is of great importance in the early stages of the collaboration.

2.2 Concept of Co-creation

The concept of co-creation has received growing attention the recent decade, but as it is a relatively young field of research many aspects are not well researched neither empirically nor theoretically (Jouny-Rivier, Reynoso & Edvardsson, 2017). A side effect is that the term has become blurred, as several approaches can be considered co-creative, hereby e.g. co-design, VCC, and resonant co-creation (Rill & Hämäläinen, 2018). To visualize this, Figure 2 gives an overview of how it has been approached in various disciplines. The core of the flower illustrates some of the activities that today are considered co-creative, while the second layer relates to collaboration and features that often are included in co-creation processes. As one move towards the tip of the petal, the approximations become less empowering and passive.

Figure 2: Co-creation in Three Disciplines



Note. Created by the authors, adapted from Rill & Hämäläinen (2018, p. 18)

In the field of design, co-creation is seen as a way to tap into the collective knowledge and creativity of customers, designers, and service providers in the design and development process (Sanders & Stappers, 2008). A co-creative approach is thereby mainly used early in the design process in the so-called fuzzy front-end activities such as insights, idea generation, and prototyping (Følstad, 2017). Within marketing, co-creation was first defined by Prahalad and Ramaswamy (2004) as *“the practice of developing systems, products, or services through collaboration with customers, managers, employees, and other company stakeholders.”* (Ramaswamy & Gouillart, 2010, p. 4) When Francis Gouillart joined the debate he added that co-creation is *“(…) a theory of interactions. It involves changing the way organizations interact with individuals, including employees, customers and any stakeholder.... The idea of co-creation is to unleash the creative energy of many people, such that it transforms both their individual experience and the economics of the organization that enable it.”* (Ramaswamy & Gouillart, 2010, p.4) This implies that co-creation is related to Service-Dominant Logic (SDL); describing the direct and indirect interactions during VCC (Rill & Hämäläinen, 2018).

Further, research within organizational development promotes resonant co-creation as a competitive strategy that can act as a tool enabling both managerial innovation and organizational renewal through creative processes across the value chain (Rill & Hämäläinen, 2018). It can thereby be considered one type of open innovation as one expands the innovative mindset beyond organizational boundaries and the silo mentality. However, it distinguishes from open innovation as the involvement of multiple stakeholders goes beyond those of special interest in the project (Frow et al., 2015). Lastly, the combination of the prefix ‘co’ and the word, ‘creation’ signalizes that one not only is creating something collectively but also creating something that provides value for both parties (Rill & Hämäläinen, 2018). Thus, co-creation is collaborative in the sense that it is a process where two or more individuals interact to create a common ground that none of them would have been able to reach by themselves (Schrage, 1990).

2.2.1 Value Co-Creation

VCC is emerging as a common practice in the B2B context, especially among firms that are contingent on the ability to exchange and apply information to a certain context, such as KIBS (Kohtamäki & Rajala, 2016; Lessard, 2014b). Yet, the increased focus has made the literature more

fragmented, and it exists a myriad of viewpoints reflecting different theoretical backgrounds. For instance, Jaakkola and Häkänen (2013) have researched VCC in relation to the actors, resources, and activities model to understand the process and connected actors in solution networks, one type of T-KIBS. This theory has also been used to understand how KIBS co-create value when actors depend on available and accessible information and communication technology (ICT) (Breidbach & Maglio, 2016). Additionally, the resource-based view has been used to investigate which resources and capabilities that are necessary for VCC (e.g. Jouny-Rivier, Reynoso & Edvardsson, 2017; Zhang, Jiang, Shabbir & Du, 2015).

Further, SDL has been initiated as the explanatory foundation of VCC in KIBS engagements (Aarikka-Stenroos & Jaakkola, 2012; Kukk et al., 2014; Lessard & Okakwu, 2016; Vargo & Lusch, 2008; 2011). It was originally proposed as a counter to challenge the Good-Dominant Logic; a company- and good-centric view where the consumer obtains value solely at the point of exchange (Merz, He & Vargo, 2009). SDL, on the other hand, is based on ten foundational premises (Appendix 2) that takes a more dynamic and holistic perspective, arguing that one maximizes value by co-creating with generic actors through interaction, resource integration, and service exchange (Kukk et al., 2014; Vargo & Lusch, 2008, 2011). Thus, as value creation in KIBS depends on the collaborative process between the actors, it is interesting to look further into how literature that adopts this view describes VCC. Ranjan and Read (2016) sought to provide a more consistent understanding of the mechanisms underlying VCC by examining 149 articles on the topic, published since 2002. They organized the current literature into theoretical bases and concluded that VCC is a third-order construct with two conceptual dimensions; Value Co-Production (VCP) and Value-in-Use (ViU). Even though the reviewed articles not solely focus on KIBS, the conceptual dimensions are consistent with the core characteristics in KIBS context, thus providing a consistent benchmark.

VCP refers to a set of activities that are carried out by generic actors within a network through ‘co-working’ in the product or service design process (Bettencourt et al., 2002). It is executed through collaboration (Lusch, Vargo & O’Brien, 2007) and dialogue (Aarikka-Stenroos & Jaakkola, 2012), and one aim at a mutual exchange of physical and mental activities to access resources and expertise to integrate valuable configurations (Ranjan & Read, 2016). Literature reveals that there are three underlying elements of VCP:

1. **Knowledge (sharing)** involves the articulation and expression of current and future needs, sharing of ideas, real-life situations, and experience among parties to co-create value (Spohrer & Maglio, 2008; Scarso & Bolisani, 2012). Within KIBS it is considered a primary component of VCC as one continuously need to combine the clients' context specific knowledge with KIBS' expertise (Kukk, 2016; Pohjola, 1993).
2. **Equity** concerns an organization's willingness to include multiple actors in co-creation activities, and to share control in favor of actor's empowerment and desire to contribute. Thus, related to the firm's provision of creating a facilitative environment for VCC (e.g. Fisher & Smith, 2011; Hoyer, Chandy, Dorotic, Krafft & Singh, 2010).
3. **Interaction** is the most prevalent element of VCC in KIBS engagements and represent the interface where actors through describes their needs and generate solutions through participation, dialogue, and engagement, in order to achieve high levels of customization (e.g. Aarikka-Stenroos & Jaakkola, 2012; Merz et al., 2009; Ranjan & Read, 2016).

ViU, on the other hand, extends beyond VCP to the customer's experiential evaluation of the service propositions, and value can arise when actors use, adjust, and manage the service proposition in everyday interactions (Vargo & Lusch, 2004). This implies that one move towards the subjective experience and the actor's motivation, expertise, process, and performance (Edvardsson, Gustafsson & Roos, 2005; Edvardsson, Enquist & Johnston, 2010). Ranjan and Read (2016) explain that this dimension has three main components:

1. An **experience** arises when actors engage cognitively, physically, and emotionally with a value proposition through co-creation (Edvardsson et al., 2010). This experience is personal for the actors involved, and can thereby generate a sense of self-transformation, not necessarily being purely rational (Jaakkola & Häkänen, 2013; Kukk, 2016).
2. **Personalization** concerns the individual actors' perception of the process, which depends on the immersion into it, application of specialized knowledge or expertise, and the supportiveness of the environment (Edvardsson et al., 2005).
3. The **relationship** between KIBS and client can be described as a joint, reciprocal, and iterative process characterized by engagement and active communication (Aarikka-Stenroos & Jaakkola, 2012; Ranjan & Read, 2016). The development of relational capabilities is essential to enable the creation of value through a more dynamic and continuous exchange (Bettencourt et al., 2002).

2.2.2 The Value Co-Creation Process

In order to understand how VCC unfolds one can look into the active, social, and dynamic VCC process that several scholars have brought attention to the last decade (Powers et al., 2016; Petri & Jacob, 2016). The VCC process can exist both in the dyad between the supplier and the client, as well as in the network involving multiple stakeholders (Ekman, Raggio & Thompson, 2016). Table 3 provides an overview of some VCC process frameworks developed in relation to the B2B context over the recent years, where each phase of the process is presented in the second column. Overall, these frameworks represent four stages of VCC: (1) *define* solutions based on the customer, its needs, and goals; (2) *design* solutions in accordance with the existing customer offerings; (3) *deploy* and implement solutions conforming to the customer; and (4) *debrief* by evaluating the process, its effectiveness, and responding to evolving customer requirements. These four stages are presented as equivalences across the VCC frameworks in Table 3, and all the frameworks look at VCC as an ongoing process, either presented as a series of activities or multiple efforts that occur simultaneously or in iterations (Kohtamäki & Partanen, 2016; Vargo & Lusch, 2008).

Even though the frameworks in Table 3 give insights into how the VCC process is organized among various B2B providers, studies point to the possibility that VCC unfolds differently in KIBS engagements (Lessard, 2015; Sarker et al., 2012). The abstract and complex nature of the task at hand requires high and close levels of interaction, in order to be able to identify and form value propositions that are consistent with the customers portfolio and where one combine resources from various actors simultaneously (Bettencourt et al., 2002; Heikka & Nätti, 2018). Table 4 provides an overview of three frameworks developed to look at VCC in KIBS. All the frameworks look at VCC as an iterative process, presenting each step as collaborative activities that constitutes a process that can look different depending on the surrounding context.

Table 3: Overview of VCC Process Frameworks in B2B

Source	VCC Process Framework	VCC Stage Depictions and Equivalencies
Ballantyne & Varey (2006)	1. Relating	Relationships occurring over time that give support to the creation and application of knowledge resources.
	2. Communicating	Communicative interactions central to developing relationships. [A/D]
	3. Knowing	Knowledge needed to improve the service experience obtained through dialogic interaction and learning.
Tuli et al. (2007)	1. Customer Requirements Definition	Understanding of the customer's business needs and environmental factors influencing the future. [A]
	2. Customization and Integration	Designing, changing, or selecting products that fit into and work well with the customer's environment. [B]
	3. Deployment	Delivery, modification, and implementation of products in the customer's environment. [C]
	4. Post-Deployment Customer Support	Solution maintenance and development of new products in response to evolving customer needs. [D]
Pavar et al. (2009)	1. Defining Value	Identifying customer value, needs, and the cost of meeting them in order to determine the benefits of a solution to multiple stakeholders. [A]
	2. Designing Value	Designing a product-service system and identifying the organizational requirements and capabilities which are available or required. [B]
	3. Delivering Value	Selecting the network of partners which can deliver required capabilities and managing performance to ensure uninterrupted access to value for customers. [C]
Marcos-Cuevas et al. (2016)	1. Linking	Continuous process of facilitating social connections and mobilizing networks by sharing and circulating knowledge and ideas about the offering, relationship, markets, and resources. [A]
	2. Materializing	Detailed operational practices tightly related to the demonstration, creation, and realisation of co-created value offerings. [B]
	3. Institutionalizing	Organizational practices related to the design of institutions and structures to continually capture and retain value created. [C/D]
Petri & Jacob (2016)	1. Problem and Need Definition	Specification of solution deliverables through identification of customers reasons for engaging with a supplier and analysis of internal factors. [A]
	2. Signaling Activities	Introductory sequence of inter-process management toward the customer. [A]
	3. Requirements Definition	Understanding of the customer's business needs and environmental factors influencing the future. [A]
	4. Customization and Integration	Designing, changing, or selecting products that fit into and work well with the customer's environment. [B]
	5. Deployment	Delivery, modification, and implementation of products in the customer's environment. [C]
	6. Post-Deployment Support	Solution maintenance and development of new products in response to evolving customer needs. [D]
Schuetschke & Durugbo (2018)	1. Collaboration	Extension of the network through collaborative activities to manage resource fit, alignment, and integration, as well as trust and commitment among the parties. [A/B]
	2. Interaction	The physical, mental, or virtual contact of two or more entities that might lead to dialogue about value, needs, resource transfer, and organizational learning. [A/B/C]
	3. Governance	Defines the ways of exchange and how regulations and set boundaries help to facilitate and manage fair, reciprocal relationships. [A/D]

Stage Equivalencies: A= Define, B = Design, C= Deploy, D= Debrief

Note: Created by the authors (2019)

Table 4: Overview of VCC Process Frameworks in KIBS

Source	VCC Process Framework	VCC Stage Depictions and Equivalencies
Aarikka-Stenroos & Jaakkola (2012)	1. Diagnosing needs	Initial phase where supplier through dialogic interaction with the client use expert knowledge and experience to identify client' needs, goals, and value for the exchange. [A]
	2. Designing and Producing the solution	Negotiation process with solution formulation and options, choice of solution, followed by a design process where client often co-design or co-produce the solution together with the provider. [B]
	3. Implement the solution	Implement or launch the solution to harvest expected benefits. [C]
	4. Managing Value Conflicts	Activities and tools to manage smooth interaction between the actors, as well as potential value conflicts that are important to solve for successful value co-creation. [A/D]
	5. Organizing Process and Resources	Identify, activate, collect and integrate suitable resources to make value creation likely. [A/D]
Kukk et al. (2014)	1. Identification of the need/problem	The identification phase in VCC where one seek to clarify the purpose and understand the need/problem to be solved, as well as articulate the expected results. [A]
	2. Optimal service selection	The service provider proposes his view of the solution, where the length of the phase depends on the context, exact content of solutions and understanding of needs. [A/B]
	3. Execution of the offering	Design and development of the chosen solution, where the customer prefer to have a minimal impact. [B]
	4. Implementation and exploitation	Implementation of the solution and adequately use of it in order to reap the benefits and value of the solution. The provider need to make an effort to deliver instructions for the implementation to facilitate value-in-use. [C/D]
Lessard & Okakwu (2016)	1. Aligning within and between actors	The process by which actors negotiate their offerings and potential value-in-use, and ensure that both parties are willing and able to commit the required resources to fulfill these offerings. [A]
	2. Actualizing value propositions	Performance of the activities and interactions that the actors have agreed on in order to co-create the solution. [B]
	3. Integrating deliberables and results	Implementation of the solution and adequately use of it in order to reap the benefits and value of the solution and newly generated knowledge. [C/D]

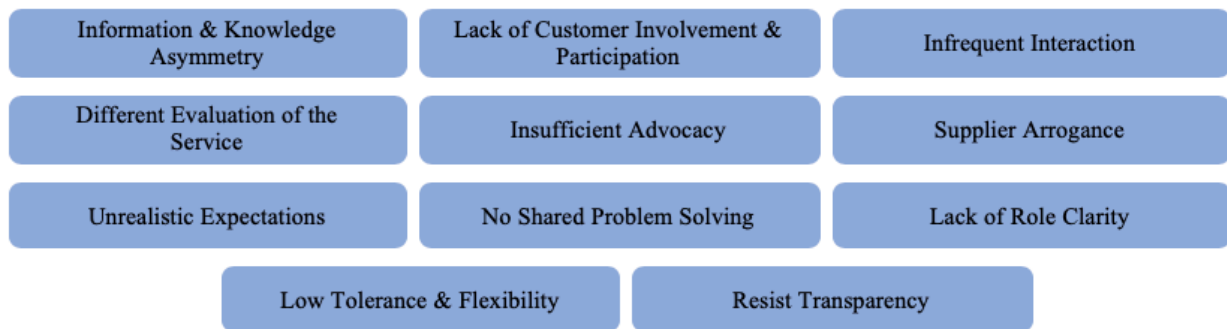
Stage Equivalencies: A= Define, B = Design, C= Deploy, D= Debrief

Note: Created by the authors (2019)

2.3 Inhibitors in Value Co-Creation in KIBS Engagements

Many projects between consultancy and client pose special challenges due to a high level of uncertainty which may generate unexpected inconveniences, problems, adjustments, and small complications as the project and relationship unfolds (Aarikka-Stenroos & Jaakkola, 2012). Yet, there is limited insights into what hurdles that strain co-creation in B2B collaborations (Durugbo and Schwetschke, 2018), and few studies examines which inhibitors that are connected to the VCC process in KIBS context (e.g Lessard & Okakwu, 2016). There is no consistent framework of which challenges that occur in VCC in the context of KIBS, and the upcoming section thereby provides an overview of the barriers that are identified to occur in this process and context across several articles (Figure 3).

Figure 3: Inhibitors in KIBS Engagements from Literature



Note. Created by the authors (2019).

One of the main challenges that has been emphasized in relation to VCC in KIBS engagements is the inherent **information and knowledge asymmetry** between the provider, client, and other stakeholders (Aarikka-Stenroos & Jaakkola, 2012; Gummesson, 1978; Kukk et al., 2014; Thakor & Kumar, 2000; Ojasalo, 2001). This imbalance is mainly traced back to the consultancy's high degree of specialization on the topic and the technological domain, and the customers expertise on the context in question (Kukk, 2016; Pohjola, 1993). KIBS mainly rely on their employees' expertise to help clients (Von Nordenflycht, 2010), thereby their knowledge in specific domains (Amara et al., 2009), their understanding on how to use their knowledge in particular situations (Miles et al., 1995), and knowledge on customers' characteristics, needs, and industries (Nätti & Ojasalo, 2008). Consequently, it can arise a significant disequilibrium of experience and expertise, as KIBS *“offer strategically significant technical or organizational knowledge that client staff do not possess or*

could not exploit without consultancy support'' (Wood, 2002, p. 994). Yet, Løwendahl (2005) point out that the asymmetry between the parties can hinder a functioning service delivery process.

Moreover, Flowers (2007) studied the main challenges faced by firms that seek to acquire the high-technology capital goods, systems, and services that forms their internal core. He states that firms that lack in-house capabilities often outsource non-core internal processes to undertake more efficient activities. However, this leads to dissipation of technical capabilities, which decreases customers understanding of what they are buying (Flowers, 2007). Additionally, the parties may experience difficulties in forming expectations, the exact content, and expected outcomes for the upcoming service solution because of the knowledge asymmetry between the parties (Aarikka-Stenroos & Jaakkola, 2010). Researchers have experienced that customers either consciously or subconsciously have a limited understanding of their needs and desires (Lapierre, 1997; Mitchell, 1994; Ojasalo, 2001) and therefore depends on the consultancy to diagnose a problem (Tuli et al., 2007), which is especially evident among inexperienced customers (Aarikka-Stenroos & Jaakkola, 2012). Thus, Möller and Törrönen (2003) argue that as information asymmetry increases, the parties gets proportionally more dependent on each other.

Research shows that sharing information results in better outcomes and the integrated perspectives that emerge activate skills that enable a dynamic process where one co-create value at various points in time (e.g. Lambert & Enz, 2012; Fisher & Smith, 2011). However, studies show that asymmetry between the knowledge bases can cause potential differences between the parties view on value outcomes (Kukk, 2016), and thereby challenge the actors in value formation (Kukk et al., 2014). The provider can find it difficult to communicate the value propositions and manage the process, while the customer can find it challenging to comprehend and evaluate the value potential of the solution (Aarikka-Stenroos & Jaakkola, 2012; Kukk & Leppiman, 2016). Further, Patterson and Spreng (2005) examined relationships in a B2B services context and argue that asymmetry between the parties complicates rational value evaluation for the client. As such, the client may lack the appropriate skills and knowledge to objectively and confidently estimate the outcomes and value of the competing service solutions provided (Eisengerish & Bell, 2006; Kukk & Leppiman, 2013; Ojasalo, 2001; Patterson & Spreng, 2005). Thus, posing the challenge of **different evaluation of the service** among partners, and parties need to *“ensure sufficient informational exchange to reach mutual grounds on the specifics of the offering”* (Kukk, 2016, p.18).

Aarikka-Stenroos and Jaakkola (2012) proposed that **unrealistic customer expectations** are quite common within KIBS engagements in regard to the nature and extent of the benefits that can be accumulated from the solution at the current level of investment. These unrealistic expectations may stem from the asymmetry between the party's knowledge bases, where clients often find it challenging to form expectations of the upcoming service experience (Heikka & Nätti, 2018). Research also reveal that KIBS frequently fails to meet the expectations of their clients regarding service value (Kukk & Leppiman, 2013). Moreover, findings from Aarikka-Stenroos and Jaakkola (2012) indicate that customers lack the openness, effort, and risk tolerance that is required to achieve the pursued ViU. Thus, Bettencourt et al. (2002) reveal that **clients with low tolerance and flexibility** can inhibit VCC, as the effectiveness of the process demands willingness and flexibility from the parties to accommodate the approach and needs of each other. Consequently, it is emphasized that the client should act with tolerance and an open mind during the process (Bettencourt et al., 2002).

Several scholars argue that the success of the collaboration relies on the customers willingness to participate in and exert control throughout the process (Grönroos & Voima, 2013; Hakanen & Jaakkola, 2012; Petri & Jacob, 2016; Yim, Chan & Lam et al., 2012). The effectiveness of the partnership is thereby closely connected to whether the client take an active role, as one through participation can reduce uncertainty among the actors by e.g. give constructive feedback, follow suppliers' instructions, and comply with rules (Bettencourt, 1997; Santos & Spring, 2015). Consequently, another challenge that is identified is **lack of customer involvement and participation** (Aarikka-Stenroos and Jaakkola, 2012; Santos and Spring, 2015), which include non-excited customers that lack motivation to make the required efforts to co-create and do not involve themselves (Bendapudi & Leone, 2003; Malshe & Friend, 2018; Petri & Jacob, 2016). Research also shows that clients experience the service as more valuable if they participate actively (Kukk et al., 2014; Kukk & Leppiman, 2016), and that projects of competitive importance often are higher prioritized (Bettencourt et al., 2002; Miles et al., 1995). Moreover, Petri and Jacob (2016) investigated VCC in a type of T-KIBS and found a variety of reasons for why customer engagement can be difficult in the process. Some of the barriers included; (1) misused, lacking or low-quality customer resources (Vafeas, Hughes & Hilton, 2016); (2) value propositions that do not engage customers' active involvement (Dong, Evans & Zou, 2008); and (3) past dissatisfying or failed VCC processes (Heidenreich, Wittkowski, Handrich & Falk, 2015; Sugathan, Ranjan & Mulky, 2017). Low dedication from the customer can thereby serve as a barrier to effective VCC, because customers can

act as an additional ‘check-and-balance’ in project governance, ensuring that the project is heading in the right direction (Bettencourt et al., 2002). Research also reveal that involvement with KIBS offering have a positive influence on customer satisfaction (Yim et al., 2012), customer loyalty (Auh, Bell, McLeod & Shih, 2007), and the value customers perceive in purchasing the service (Lapierre, 1997). Moreover, as the relationship between the actors is reciprocal, another identified barrier is **no shared problem solving** among the client and provider. This can be the case, when clients see their role as solely paying a fee in exchange for a service, rather than taking an active role in solution development and problem-solving (Bettencourt et al., 2002). An additional issue that is identified possible to arise is **insufficient advocacy**, i.e. lack of support from the customer which often occur if one lack a customer lead (Bettencourt et al., 2012).

Moreover, researchers have highlighted the importance of communication in a client-KIBS relationship (e.g. Bettencourt et al., 2002). Zieba & Pawel (2017) argue that communication is fundamental in the initiation phase to establish a mutual understanding of the client's problem. Yet, studies in B2B research highlight that: *«some customers may at times resist suppliers’ overtures to enter their environments, thereby erecting barriers to suppliers’ abilities to be fully informed about customers’ needs or relate to customers at a deeper level”* (Malshe & Friend, 2018, p. 913). This can become a source of disconnection within the VCC process because the client may **resist transparency** (Malshe & Friend, 2018). It thereby arises a paradox between knowledge protection and sharing, as the client is vulnerable to exploitation when sharing sensitive and personal data (Følstad, 2017). Accordingly, customers can be reluctant to share sensitive information with the consultancy in fear of losing competitive advantage if the data leaks out (Malshe and Friend, 2018; Zieba & Pawel, 2017). Hence, it is essential to ensure that knowledge sharing do not lead to harmful outcomes, but rather facilitates a more dynamic VCC process (Gil-Saura, Frasquet-Deltoro & Cervera-Taulet, 2009). Having that said, transparent communication not only rely on the customer, but also on the service provider’s understanding of the ideas and doubts of the client. It is thereby important to have the ability to evaluate the customers inputs throughout the process in a transparent dialogue (Zieba & Pawel, 2017), and all information relevant to the project should be shared between the parties (Bettencourt et al., 2002).

Further, the VCC process is contingent on the ability of all parties to combine and align multiple functions across various levels of the supplier-customer exchange (Storbacka, 2011) and promote

interactions of quality between the actors (Fryberg & Jürriado, 2009). Lessard (2014b) found the exchange of information throughout the service process to be one of the keys to high-value creation in KIBS engagements, initiating that **infrequent interaction** can be a barrier. This is in line with Malshe and Friend (2018) who found that failure to communicate in appropriate proportions is related to customer apathy in the B2B sector. Apathy is defined as “*customers’ indifference toward suppliers’ VCC initiation overtures*” (p.902) and was detected among demotivated customers. Apathetic customers interact with the provider at an operational-level to solely ensure that the terms of the contract are fulfilled, and thereby do not engage deeply beyond day-to-day supplier communication. Hence, apathetic customers hardly respond to providers’ request to discuss deeper-level work process integration (Malshe & Friend, 2018). Additionally, infrequent interaction is investigated to cause inability to deliver maximum value from the service providers’ side. One believes that interactions in themselves can create value as they trigger social practices, and that more unique solutions are made possible through positive and constructive feedback on various solutions (Ballantyne & Varey, 2006). From the client's side, infrequent interaction can lead to an inability to evaluate the outcome properly (Aarikka-Stenroos & Jaakkola, 2010; Lessard, 2015).

Another inhibitor identified in literature is **supplier arrogance** or super-professional, which often refer to KIBS employees which acts with an arrogant and ‘know-it-all’-attitude. These employees do not necessarily promote collaborative problem solving between the actors, and might discourage collaboration, as the consultant then prefer to rely on their own knowledge and judgment. As a result, customers can get the feeling of being taken for granted or that their competency is questioned since their contribution might be ignored (Aarikka-Stenroos & Jaakkola, 2012). Customers might thereby avoid interaction with or expressing a negative attitude towards the provider. Thus, indicating that this barrier can lead to customer annoyance, i.e. “*customers’ overt aversion and resentment toward supplier VCC initiation overtures*” (Malshe & Friend, 2018, p.909). Malshe and Friend (2018) have also identified that annoyed customers can get cautious to the provider and loses a considerable of trust to the partnership in a B2B context. Moreover, studies show that if customers **lack role clarity**, it can hinder their involvement and possibly hamper client’s willingness to participate in the service delivery process due to lacking understanding of their motivation and ability (Aarikka-Stenroos & Jaakkola, 2012; Bell & Eisingerich, 2007; Bettencourt et al., 2002). Role clarity can be defined as “*knowledge of what it is expected of them, of the tasks they have to execute, and of their responsibilities*” (Santos & Spring, 2015, p. 89).

2.4 Supplier Strategies to Manage Inhibitors

Bettencourt et al. (2002) recognize the client as essential in VCP and argue that the participants need to possess the necessary knowledge and skills, as well as motivation, to fulfill their responsibilities. Thus, indicating that successful VCC depends on the client's ability to co-create with the supplier (Spohrer & Maglio, 2008). However, there is limited research on which responses managers can use to handle various challenges that arise in the KIBS-client relationships (e.g. Bettencourt et al., 2002; Santos & Spring, 2015). Strategies represents performance enhancing tools which the consultants can use to optimize the service process, and managers from both sides should work together to implement efficient resource integration and interaction processes (Heikka & Nätti, 2018). Santos and Spring (2015) also identified that problem management actions were essential in handling unexpected situations, while Malshe and Friend (2018) argue that the service provider need to address these situations because the client expect it from them. This is because providers who only work to alleviate the symptoms from the problems, rather than addressing the problem's origin, often lose clients support and confidence (Malshe & Friend, 2018). Thus, this section aims at giving an overview of the supplier strategies that KIBS can used to manage the inhibitors that arise during the VCC process (Figure 4). The upcoming strategies are found evident in KIBS literature, but also supplemented with insights from professional services.

Figure 4: Supplier Strategies in KIBS Engagements from Literature



Note. Created by the authors (2019).

2.4.1 Project Management and Planning

A strategy that is identified in theory in relation to the inhibitors is **project management and planning** (e.g. Bettencourt et al., 2002; Santos & Spring, 2015). Through a case study on KIBS, Kukk et al. (2014) revealed that any customer contribution should be *“justified as well as planned beforehand”* (p.57). As such, all actors should participate in a dialogue concerning the methods used throughout the project, as well as the roles and their connected responsibilities to avoid role unclarity (Bettencourt et al., 2002; Böstrom, 1995). Additionally, it is important to agree on a timeline and

structure in advance, as this will ensure customer participation and involvement from the beginning and positively affect the perceived value during the service delivery process. This way, all contribution made on the customer's end is agreed on and planned in the initial phase of the project, which allows the customer to feel in control of the situation (Kukk et al., 2014). Additionally, Lessard and Okakwu (2016) highlight the importance of contractual agreements which can enable open communication and information sharing, and act as a more tangible governance mechanism and be key to successful VCC. It is also emphasized that KIBS need to offer the right resources for the task at hand, to create value, trust, commitment, and economic satisfaction among the clients (Heikka & Nätti, 2018).

According to Bettencourt et al. (2002), the project lead typically has the main responsibility for project management. In addition to being competent in traditional project management tools, the project lead should have the ability to ‘transform’ the interests of client to benefit the relationship and process they are involved in. It is essential that project leads from both sides participate in the planning process by collectively looking at project timing, details, and success criteria. In this process, the project lead from KIBS must *“be able to motivate client partners to excel in co-production by providing a compelling vision of the project, facilitating cooperative interactions among multiple players, being considerate and supportive of the needs of others, challenging others to think outside of the box, and elevating the expectations of all parties involved in the project”* (Bettencourt et al., 2002, p. 120). This way, project management and planning can be used to avoid unrealistic expectations, different evaluations of the service and infrequent interaction (Bettencourt et al., 2002). In addition, they must be capable of gaining *“the trust and respect of partners through demonstrations of their strategic, industry, and product knowledge and by modeling the kind of partnership-building behaviors that they desire in return, including regular and frequent interaction with client contact persons, open sharing of information, and flexibility in conflicts and unexpected situations”* (Bettencourt et al., 2002, p. 120). Moreover, it is important to keep the project lead as well as other relevant decision-makers informed throughout the process if changes occur (Santos & Spring, 2015). These authors also state that preventive actions can be used to manage fewer expert clients of KIBS with dissimilar levels of motivation to participate. They define it as *“use of experience, contingencies, and assumptions to fill in gaps left by lack of customer participation and reduce the need to involve them”* (Santos & Spring, p.89). Moreover, researchers have looked at the effects of various technologies to enable VCC, e.g. video- and teleconferencing and email, and found

that these can have a positive effect as substitutes to face-to-face contact (Breidbach & Maglio, 2016; Breidbach et al., 2013). Research also reveal that this can be particularly evident in T-KIBS as it involves intensive use of ICT (Miles et al., 1995; Müller & Doloreux, 2009).

2.4.2 Client Training and Education

A strategy identified in both KIBS literature and the B2B context is **client training and education** (Bettencourt et al., 2002; Eisingerich & Bell, 2006, 2008; Kuk & Leppiman, 2016; Santos & Spring, 2015). Education is found to be of particular importance when the delivered service is highly complex, intangible, and involve uncertainty (Eisingerich & Bell, 2006), which is the case in KIBS engagements. This is because knowledge transfer is essential for the client to obtain the required expertise and skills to co-create the solution, hence being vital for successful transformation (Caloghirou, Kastelli & Tsakanikas, 2004). Transfer of training is thereby of great importance both in the beginning and during the VCC process to make the client confident in making suggestions and ensure that the client obtain the ability to maintain the solution alone (Aarikka-Stenroos and Jaakkola, 2010; Kuk, 2016; Lessard's 2014a, 2014b). Research also shows that it contributes to a more effective VCC process by increasing the participants motivation (Auh et al, 2007; Büttgen, Schumann & Ates, 2012; Eisingerich & Bell, 2006), which is important as *"Clients' contribution to the service delivery process is integral to service success, affecting both the quality of the service output and, ultimately, clients' satisfaction with the service solution provided"* (Bettencourt et al., 2002, p.100). Research on customer participation in financial services also show that enhancing the client's knowledge has a positive and strong impact on trust and loyalty (Eisingerich & Bell, 2006; 2008).

Within the context of KIBS-client relationships, educational activities are mostly performed within the project team, and research find few evidences for training at an organizational level (Kuk & Leppiman, 2016). Research highlight the importance of these activities both in the beginning of and during the service delivery (Bettencourt et al., 2002; Kuk & Leppiman, 2016; Santos & Spring, 2015). Santos and Spring (2015) particularly highlight the importance of educating the beneficiary in the initial phase of the project, where the consultants *"use their technical knowledge and experience to ask questions and explain to customers how systems work"* (p.89). Bettencourt et al. (2002) agrees and emphasize that it is beneficial to arrange training and information workshops early, to immediately inform the client of the importance of the interpersonal relationship, dialogue, and

transfer of information. In this regard, Kukk and Leppiman (2016) found that the activities either are prepared as a particular course before the collaboration starts, or tailor made to respond to the specific needs and interest of the client. They emphasize that it is important to create an arena where participants can collect knowledge or experience from each other, and where the consultants can introduce tools and working methods the clients should understand. These activities are also important for further collaboration as the participants have deeper insights into the consultant's intentions and often are more willing to share when they understand the value of their knowledge. Kukk and Leppiman (2016) also emphasize that the consultants should act as facilitators in order to create a good learning experience, for instance by allowing the participants to move around and express themselves visually with e.g use of post-its on walls. The consultants should thereby facilitate and assist their client in organizational learning (Massey & Walker, 1999).

In addition to these activities, research reveal that education can include decision guidance, giving timely and reliable information for their discussions (Auh et al., 2007), guiding them on how to understand the information (Eisingerich & Bell, 2008), and teaching them how to execute tasks (Eichentopf, Kleinaltenkamp & van Stiphout, 2011). Client training and education thereby improve the client's ability to understand what they are buying (Santos & Spring, 2015), as well as it increases customers' expertise and role clarity (Bell & Eisingerich, 2007; Eisingerich & Bell, 2006), which makes the customer more capable of sharing important information and supporting decision-making (Yim et al., 2012). Hence, these activities often result in a reduction of information and knowledge asymmetry between the parties and it increases the quality of the resources provided by the client. This strategy also allows the provider to learn more about their clients which is important for designing good solutions, and it can lead to better service specifications that can minimize delays and extra costs, better decision making, and exclusion of service alternatives that would not be interesting to customers (Santos & Spring, 2015). Yet, it is important for the consultants to have in mind that the KIBS' effort to enhance client knowledge will be perceived differently based on the starting levels of expertise of individual customers, which also impacts the creation of trust (Eisingerich & Bell, 2008). Consequently, the authors recommend firms to be transparent with their clients to avoid the tendency of keeping the methodologies and processes in a 'black box'. Further, one should have in mind that some customers have limited resources available, and this may lower their ability and willingness to participate in educational activities (Santos & Spring, 2015).

2.4.3 Client Socialization and Team Building Activities

As with any personal relationship, it is critical to set the tone for the future of the business relationship early in the process for both KIBS and client, as *“the reality is that co-production behaviors are performed by individuals engaged in interpersonal relationships”* (Bettencourt et al., 2002, p.117). Consequently, several authors highlight the importance of **client socialization and team building activities** to avoid lack of customer participation and create positive interactions in the partnership (Bettencourt et al., 2002; Böstrom, 1995; Büttgen et al., 2012). Moreover, Mills (1986) investigated clients of service organizations and their role as ‘partial’ employees. He found that clients are subject to a socialization process, and that this was especially dominant in long-term projects with ongoing interactions. He distinguished between three phases of customer socialization; anticipatory-, encounter-, and the acquisition phase. The first phase takes place before the first direct interaction between the parties (Mills & Morris, 1986), and include clients predefined beliefs, perceptions, and expectations towards the upcoming service delivery, which is gained through general communication by the organization, in addition to available reports. Further, the client enters the second phase where client’s expectations connect with the actual circumstances through appropriate socialization activities, which leads to a customer self-perception and definition of roles (Büttgen et al., 2012). Lastly, the third phase adopted the organizational socialization definition by Schein (1968) which consist of the unification and internalization of norms, values, and behavioral patterns. However, Santos & Spring (2015) investigated strategies to manage variation in customer participation and defined customer socialization in line with Schein (1968) but found no cases of client socialization in KIBS engagements that aimed to do this. Further, research show that interactions between project leads in KIBS can increase the motivation and inspire to help one another since the activities can contribute to *“increased interpersonal liking, sharing, and understanding of similarities that are fundamental ingredients to interpersonal trust”* (Bettencourt et al., 2002 p. 118). Additionally, Büttgen et al. (2012) who researched service firms and VCP argue that the service provider can influence internal service locus of control with organizational socialization activities, which was especially evident among customers that possess prior experience with the service firm. In addition, they emphasized the importance of proactive, repeated socialization activities.

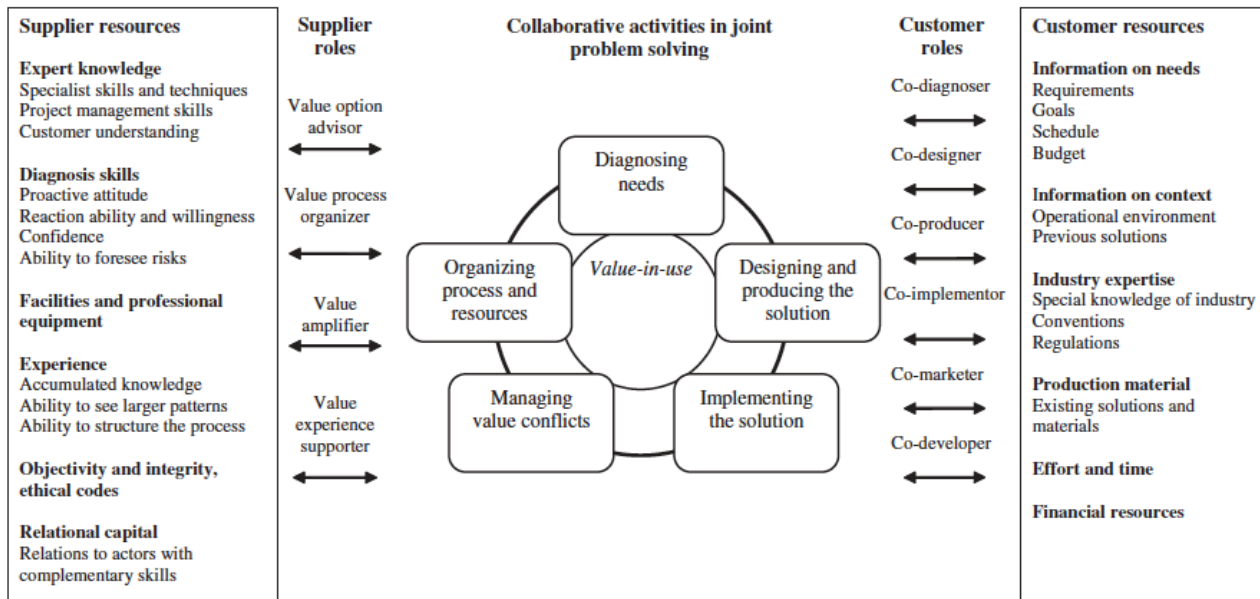
3.0 Theoretical Framing

This part aims at giving the reader an understanding of the collaborative activities in the VCC process, as well as the connection between identified inhibitors and strategies, in order to provide a lens of analysis for the research process. The section ends with a conceptual model which illustrate the relationships between the concepts.

3.1 The Value Co-Creation Process

In order to get an increased understanding of how VCC is executed on an everyday basis, one need to look further into the components of the VCC process, where Table 4 provided an overview of this in KIBS engagements (Aarikka-Stenroos and Jaakkola, 2012; Kukk et al., 2014; Lessard and Okakwu, 2016). This model adopts the model proposed by Aarikka-Stenroos and Jaakkola (2012) as a basis (Figure 5). These authors proposed five collaborative activities that occur iteratively and constitutes the VCC process; (1) Diagnosing needs, (2) Designing and producing the solution, (3) Organizing the process and resources, (4) Managing value conflicts, and (5) Implementing the solution, which are chosen for several reasons. Firstly, Aarikka-Stenroos and Jaakkola (2012) has built the suggested VCC model on an extensive amount of data; 120 qualitative interviews with suppliers and clients of P- and T-KIBS. The suggested activities (1-5) also provides broad insights beyond the design- and development process, by giving insights into surrounding aspects of the relationships which might be of importance when revealing inhibitors that occur in VCC. Further, the work by Aarikka-Stenroos and Jaakkola (2012) is widely acknowledged; the article has been cited more than 500 times in Google Scholar (Google Scholar, 2019), and been used in several research projects (e.g. Breidbach & Maglio, 2016; Frow et al., 2015; Heikka & Nätti, 2018; Malshe & Friend, 2018). Thus, the researchers believe this model can help provide insights and guidance into how KIBS collaborate with their clients, as well as which inhibitors occur during the process. It is also important to be aware of which resources the parties brings into the process and the roles of the actors, in order to be able to understand the barriers.

Figure 5: Joint Problem-Solving as VCC in KIBS



Note. Adapted from Aarikka-Stenroos and Jaakkola (2012)

3.1.1 Diagnosing Needs

At the outset of a project, the consultancy has insufficient information and a limited understanding of the customer, its specific problems, and needs. The first activity thereby concerns (1) **Diagnosing needs**, in order to identify the goals and need for exchange as the “*customer possess much knowledge needed for problem solving*” (Aarikka-Stenroos & Jaakkola, 2012; p. 17). The expected form of collaboration during this stage entails interviews, service buyer visits, observations, and face to face meetings (Kukk et al., 2014). In relation, Pohjola (1993) stress the importance of combining the knowledge bases, where the customers have expertise on the context, and the supplier on how the task most optimally can be solved. Research also show that personnel from various business functions and hierarchies should be involved in the process to ensure a broad perspective (Mustak, 2018). If the project is targeted B2B2C (Business-To-Business-To-Consumer), i.e. to an end-user outside the client organization, these actors should be involved (Bettencourt et al., 2002).

According to Aarikka-Stenroos and Jaakkola (2012) the supplier is usually responsible for using their expert knowledge, accumulated experience, and professional objectivity to diagnose the problem of the client in a thoroughly manner. The supplier thereby assists the client in the identification of the

issue as a *value option advisor* of possible solutions and connect each alternative to its potential ViU, while the client act as a *co-diagnoser* by providing information (Aarikka-Stenroos & Jaakkola, 2012). Further, research reveal that the client recognizes the importance of problem identification as a key to VCC, because it provides an opportunity to clarify the purpose and expectations to the project (Kukk et al., 2014). However, the parties often lack a shared understanding of the goals, as well as the benefits and sacrifices connected to the possible solutions (Aarikka-Stenroos and Jaakkola, 2012). Consequently, communication is vital for both parties in order to possess enough information to make decisions that provides the best value in the long run. This implies that the supplier needs insights into the customer's goals and needs (Jaakkola & Hakanen, 2013), industry knowledge (Nätti & Ojasalo, 2008), processes and business procedures (Bettencourt et al., 2002), operations (Tuli et al., 2007), and budget and business context (Aarikka-Stenroos & Jaakkola, 2012). By this, one assumes the supplier to be able to foresee how environmental and competitive changes will influence the client's future.

3.1.2 Designing and Producing the Solution

In the second activity the actors are (2) **Designing and producing the solution**, thereby entering a negotiation process to define the problem and potential value propositions. KIBS are often in charge of the process, especially controlling solution formulation which often occur through several iterations, and the customer evaluates the alternatives by looking at the potential of the different solutions and their ViU, in addition to the related resource requirements (Aarikka-Stenroos and Jaakkola, 2012). Thus, clients often rely on the suggestions, assessments, and evaluations of the supplier, and the time frame of this activity and the resources required depends on the degree of negotiation needed to form the proposed solution (Kukk et al., 2014). However, it is important to emphasize that some clients are regarded as experts due to their capability of communicating requirements (Böstrom, 1995), executing service tasks (Eichentopf et al, 2011), and make distinctions between service attributes (Bell & Eisingerich, 2007). Consequently, the customer can act as *co-producers* of the solution, by informing about new regulations, requirements, or practices. Thus, some customers are seen as equal partners instead of only 'followers' (Aarikka-Stenroos & Jaakkola, 2012). However, Kukk et al. (2014) found that most customers do not perceive themselves as equal partners in creating value, even though they label KIBS as a 'partner'.

However, many customers expect their contribution to be completed after the optimal solution and its requirements are chosen, and often see their role as insignificant because they regard the information already provided as sufficient to solve the problem. They thereby consider the consultants to be competent enough to make decisions without asking for inputs and feedback too often, and the opposite may create the impression that value is not created through the competence of the consultancy as the client's contribution is higher than they expected (Kukk et al., 2014). Research also reveal that increased participation may generate resistance within the organization, as personnel may perceive that the value outcomes generated are insignificant compared to their efforts (Mustak, 2018). Thus, it is important that the customer perceives the value as high, as a positive experience may facilitate repeat purchase behavior and satisfaction (Patterson & Spreng, 2005). However, many clients also express that they perceived KIBS to be trusted experts, as *“the additional services proposed by the supplier are not considered as pushing extra sales, but as value adding, extended problem solving that amplifies value creation”* (Aarikka-Stenroos & Jaakkola, 2012 p. 21).

3.1.3 Organizing the Process and Resources

The study by Aarikka-Stenroos and Jaakkola (2012) also acknowledge that (3) **Organizing the process and resources** is a key activity in the VCC process. Suppliers generally act as a *value process organizer* by structuring the *“the value co-creation process and to identify, activate, collect and integrate relevant resources to make value creation possible”* (Aarikka-Stenroos & Jaakkola, 2012 p. 21), while customers act as *co-producers*. However, in most industries customers do not always take this role voluntarily, as they are insecure on what they can contribute with, and it becomes essential to motivate and give blatant instructions to make them safe (Aarikka-Stenroos & Jaakkola, 2012). Additionally, research show that some customers struggle to keep close collaboration with the supplier due to lack of resources (Töllner, Blut & Holzmüller, 2011). However, research reveal that this not necessarily is the case for the technology industry where customers often easily can provide resources (Aarikka-Stenroos & Jaakkola, 2012). This is in line with the research by Kukk et al. (2014) who found a fairly high willingness to co-create among clients.

3.1.4 Managing Value Conflict

Another essential activity of the VCC process is (4) **Managing value conflicts**. Value conflicts may prevent collective value creation among the actors, and it can be traced back to different views in regard to optimal ViU and non-working interactions between the actors. Moreover, it entails issues such as supplier arrogance and unrealistic expectations which is previously mentioned. Managing value conflicts may involve ample effort and might end up as a lengthy process which requires open communication and discussions related to the resource requirements, and how this affects the value of the solution (Aarikka-Stenroos & Jaakkola, 2012).

3.1.5 Implementing the Solution

Lastly, one need to (5) **implement the solution** in order to receive its ViU, and it varies whether it is the supplier or the client themselves that are responsible. However, the supplier should not deliver any solution that the client does not have the competence to use in practice (Kukk et al., 2014). In relation to this most providers believe that ViU increases when the supplier affiliates the customer by being a *value experience supporter* (Aarikka-Stenroos and Jaakkola, 2012). Kukk et al. (2014) add that clients often perceive this activity to be an inseparable part of the service delivery, as the evaluation depends on the results and outcomes of the service. Nevertheless, Aarikka-Stenroos and Jaakkola (2012) found that several projects lacked an apparent implementation phase, but rather realize the solution through gradual development and implementation and expected the supplier to guide them through these efforts. One also see that some choose to not implement the solution at all, as some versatile customers may hire consultants to deliver a specific solution, but the customer use it in the end simply as a *“fresh perspective, source of ideas, a second opinion, or a vehicle for learning, rather than a plan to be meticulously followed”* (Aarikka-Stenroos & Jaakkola, 2012, p. 22).

3.2 Inhibitors and Strategies in the Value Co-creation Process

In Chapter 2 the researchers introduced the inhibitors and strategies identified in literature. Existing research reveals that several of the inhibitors are closely connected, but that one inhibitor does not necessarily lead to the other. Overall, one uncovered eleven inhibitors that could occur during VCC and three supplier strategies for managing them. Consequently, one sought to identify the connection between the inhibitors, strategies, and VCC. However, it turned out impossible from existing literature to examine which inhibitors occur during which activities in the VCC process. As an alternative, the authors mapped the indicated relationship between the inhibitors and responses, by connecting which strategy that was used as a response to which inhibitor, or the other way around. This resulted in the creation of Table 5.

Table 5: Identified Connections Between Inhibitors and Strategies from Literature

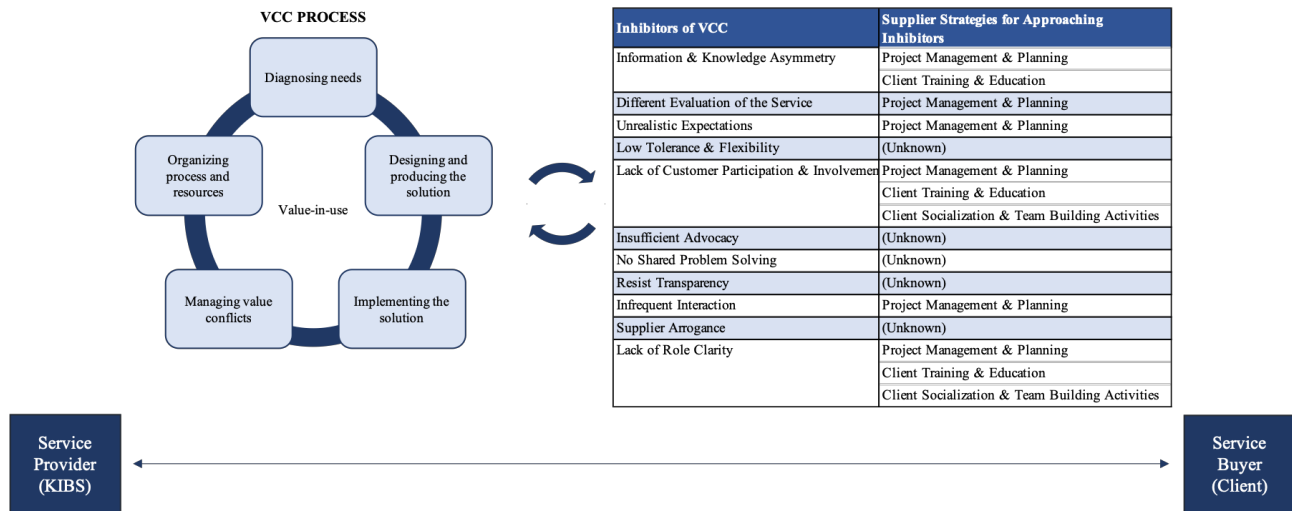
Inhibitors of VCC	Supplier Strategies for Approaching Inhibitors	Theoretical Background
Information & Knowledge Asymmetry	Project Management & Planning	Bettencourt et al., 2002
	Client Training & Education	Caloghirou et al., 2004; Santos & Spring, 2015; Kukkk & Leppiman, 2016
Different Evaluation of the Service	Project Management & Planning	Aarikka-Stenroos & Jakkola, 2012; Bettencourt et al., 2002
Unrealistic Expectations	Project Management & Planning	Bettencourt et al., 2002
Low Tolerance & Flexibility	(Unknown)	
Lack of Customer Participation & Involvement	Project Management & Planning	Kukkk et al., 2014
	Client Training & Education	Bettencourt et al., 2002; Kukkk & Leppiman, 2016; Santos & Spring, 2015
	Client Socialization & Team Building Activities	Bettencourt et al., 2002; Böstrom, 2005; Büttgen et al., 2012
Insufficient Advocacy	(Unknown)	
No Shared Problem Solving	(Unknown)	
Resist Transparency	(Unknown)	
Infrequent Interaction	Project Management & Planning	Bettencourt et al., 2002
Supplier Arrogance	(Unknown)	
Lack of Role Clarity	Project Management & Planning	Bettencourt et al., 2002; Böstrom, 1995
	Client Training & Education	Bell & Eisingerich, 2007; Eisingerich & Bell, 2006, 2008
	Client Socialization & Team Building Activities	Büttgen et al., 2012

Note. Created by the authors (2019)

3.3 Conceptual Model

In order to answer the RQ, the authors have developed a conceptual model (Figure 6), where one combines the; (1) VCC process; (2) inhibitors; and (3) strategies proposed for approaching these challenges. The model intends to illustrate the relationship between these concepts, and represents an abstract way of mirroring the complex, fluid and dynamic VCC process.

Figure 6: Conceptual Model



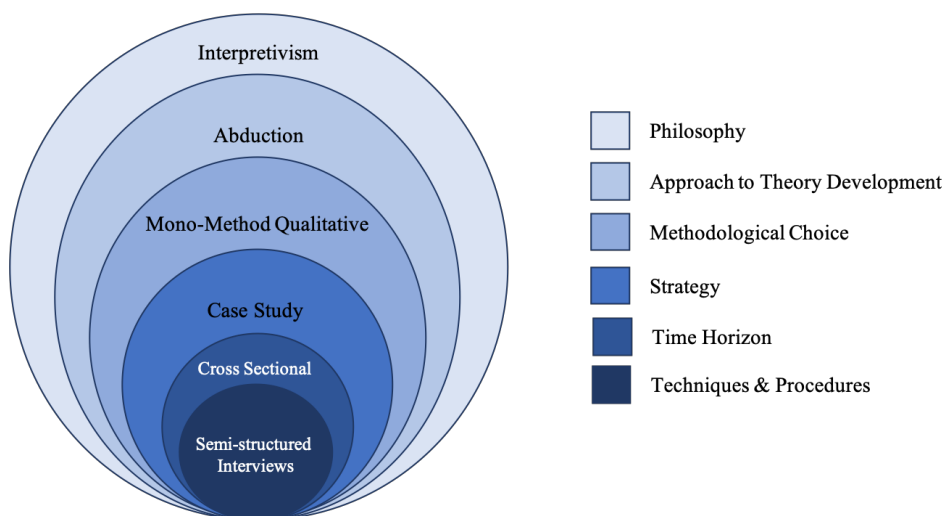
Note. Created by the authors (2019)

This research uses the VCC process between the parties as a starting point for exploring how various hurdles that strain VCC are handled. Thus, the study is conceptually rooted in the VCC' foundation, i.e. SDL, as one assumes that consultants and clients are co-creators of value. One thereby assumes that VCC occurs through human-to-human interactions between the service provider, i.e. KIBS, and the service buyer, i.e a private or public actor that seek competence to solve an issue, as illustrated with the arrow. When these actors start their collaboration, they enter a VCC process as shown above the line. This process consists of five collaborative activities; (1) Diagnosing needs; (2) Designing and producing the solution; (3) Organizing process and resources; (4) Managing value conflicts; and (5) Implementing the solution (Aarikka-Stenroos & Jaakkola, 2012). This process is circular as several activities can co-occur. The arrows that connect the VCC process to table that illustrates inhibitors and strategies indicate that the inhibitors can occur at a continuous basis throughout the VCC process and that each challenge that occurs will influence the nature of the VCC process. This implies that one on an everyday basis change the state of interaction, and the actors involved should thereby not only be aware of how one solves challenges that occur but also how one can avoid them by various actions in advance.

4.0 Methodology

It is crucial to plan a research thoroughly to ensure proper social research and the forthcoming part is meant to prepare the reader for the research analysis and its results. The following section describes the underlying philosophy of the research, and the methodological choice, research strategy, data collection method, and analysis that follows. Figure 7 gives an overview of the depicted research process.

Figure 7: Methodological Adaptation - The Research ‘Onion’



Note. Made by the authors, adapted from Saunders, Lewis & Thornhill (2016, p. 124)

4.1 Philosophy of Science

At every stage of a research the researchers make a number of assumptions that influence the understanding of the RQ and the research process. In order for a research project to be coherent, these elements should be underpinned by a research philosophy: “*a system of beliefs and assumptions about the development of knowledge*” (Saunders et al., 2016, p.125), i.e. helpful in clarifying the assumptions about the way one view the world. There is no universal agreement about the ‘best’ philosophy in business and management research, and thereby no distinct way of viewing organizational entities or the ‘realities’ of their actors (Saunders et al., 2016).

The research philosophy that are deemed as most coherent with the RQ is *interpretivism*. Interpretivism argues that human beings and their social world cannot be studied through natural

science, as there are distinct differences between humans and physical objects. Thus, research undertaking this philosophy is rather subjective and function as a critique against positivism, as one believes that social actors create meanings that is worth studying. It thereby allowed the researchers to take account of the complexity and uniqueness of VCC in KIBS engagements by collecting the inhibitors and strategies that the research participants found meaningful, and that were part of creating their reality. As interpretivist, one recognizes value-bounded aspects, and acknowledge that the researcher is key to the contribution as a participant in the research process (Saunders et al., 2016).

Within this subjective and rather regulational view on the social world (Burrell & Morgan, 1979), the authors adopt towards two stands; (1) *Phenomenology* and (2) *Social Constructivism*.

1. The researchers act a *phenomenologists* as the data collection and analysis focused on the respondents lived experiences and their recollection and interpretation of those (Saunders et al., 2016). The collaboration between KIBS and client thereby provide meaning to the involved actors, which makes these actions meaningful. One also sought to get insights into the participant's 'common-sense thinking' in regard to the challenges that occur and the strategies that follows (Bryman, 2016).
2. *Social constructivism* refers to a stand where one believes that the social reality is created by social actors (Bryman, 2016). Participants in KIBS engagements thereby create partially shared realities based on their interests, goals, and experiences through the activities they take part in. Thus, they assign meaning to the phenomena through everyday interactions where the social reality is in constant state of revision (Bryman, 2016; Egholm, 2014).

Leaning towards this research philosophy has influenced the researcher's perception about human knowledge and the realities one encounter, thus epistemological and ontological assumptions (Saunders et al., 2016).

4.1.1 Ontological Considerations

Ontology refers to assumptions the researchers make about the nature of reality, as it shapes how one perceive the social actors experience of VCC in KIBS engagements, and consequently the inhibitors and strategies that occur (Saunders et al., 2016). This research adapts a rather subjective ontology by leaning towards *social constructivism*, as one believes that the challenges and responses can be social

constructions built up from how the actors behave, interpret, experience, and evaluate the projects they are part of (Ballantyne & Varey, 2006; Bryman, 2016; Saunders et al., 2016). The reality is thereby socially constructed through interpersonal interactions and it can constantly be changes and re-negotiated, which is in line with the nature of VCC as *“each instance of resource integration, service provision, and value creation changes the nature of the system to some degree and thus the context for the next iteration and determination of value creation”* (Vargo and Lusch, 2011, p.185). This ontological position is also mirrored in SDL which emphasize that *“the customers is always a co-creator of value”* and *“value is always uniquely and phenomenologically determined by the beneficiary”* (Vargo & Lusch, 2008, p.7).

Further, Bryman (2016) state that *“constructivism also suggests that the categories that people employ in helping them to understand the natural and social world are in fact social products”* (p. 30). Undertaking this viewpoint, one believes that the respondents have socially constructed viewpoints, as they through various experience have obtained their unique understanding of the topic. Consequently, there exists a plethora of realities which are not entirely objective. Thereby recognizing that the actors can interact together but experience the challenges that occur and how they are solved differently. In order to capture this specific version of the social reality, one have e.g. made a semi-structured interview guide that aimed at enabling the interviewees to share their subjective opinions and experience.

4.1.2 Epistemological Considerations

Epistemology concerns assumptions about human knowledge; what is regarded as appropriate or acceptable knowledge, and how this knowledge is communicated to others (Bryman, 2016; Burrell & Morgan, 1979). As interpretivists, one believes that the reality is best understood from the point of view of the individuals who are directly involved in the activities which are studied (Burrell & Morgan, 1979). One uses the consultants' and clients' lived experience with VCC to get insights into *“the underlying meaning and opinions”* (Egholm, 2014, p.91) about the challenges that occur and its connected responses. The researchers thereby favor the individual's different interpretations, narratives, and stories over facts, and motivated the participants to openly reflect around their own experiences. The authors thereby rely on less tangible data sources, such as attitudes and feelings, to tap the social reality which is *“made from the perceptions and consequent action of social actors”*

(Saunders et al., 2016, p.130). This have required the researchers to take a more empathic position by being transparent about the current assumptions one has about the world, while simultaneously understanding the interview-objects' from their point of view (Bryman, 2016).

Moreover, it is important to recognize that the challenges that occur in each instance of VCC do not transfer easily between social contexts (Luhmann, 1995), and one assume that there is no big truth outside the human being (Bryman, 2016). Hence, one acknowledges the limits of generalization, but rather emphasize that participants in VCC gain subjective knowledge and experience that provide their life with meaning. This means that the individuals which are studied interact with their environments and seek to make sense of it through their interpretation of events and meanings (Saunders et al., 2016). Nonetheless, it is important to emphasize that the researchers are aware of the triple interpretation that is in play, as the authors through the results are “*providing an interpretation of others' interpretations*” (p.17), which is further interpreted in relation to the theories and literature that the paper is based upon (Bryman, 2016).

4.2 Research Strategy and Design

The relationship between theory and research describes a research process, and when determining research strategy and design it is important to understand what form of theory one talk about and which approach the researchers use in theory development (Bryman, 2016).

4.2.1 Research Strategy and Approach to Theory Development

In relation to methodology, scholars and practitioners find it helpful to distinguish between quantitative and qualitative research (Bryman, 2016). This research is *exploratory* and *qualitative* in nature, which is appropriate for studying under-investigated topics with a relative lack of theory (Yin, 2018). The phenomenon is also complex and multifaceted, and a qualitative approach can enable the researchers to analyze the phenomena at a deeper level. One can thereby get an understanding of how various challenges affect the collaboration between the parties. Thus, as one seeks to generate an understanding from the empirical examples at hand, the research entails *inductive* elements (Bryman, 2016). However, the researchers are aware that the notion between induction and deduction is not as rigid, and “*just as deduction entails an element of induction, the inductive process is likely to entail*

a modicum of deduction” (Bryman, 2016, p.23). Thus, one acknowledges that this research entails some *deductive* elements as one e.g. has used theory to build a conceptual model which explains the established understanding of the topic and guides the research. In this way one provides an *explanatory* feel to the research, as the authors draws connections between existing theory and collected data.

Hence, this research applies a more pragmatic view on theory development through *abduction*: “*a form of reasoning with strong ties to induction that grounds social scientific accounts of social world in the perspectives and meanings of participants in those social worlds*” (Bryman, 2016, p.688). This research is abductive as one uses the perspectives of the interviewees as the empirical point of departure and grounds the theoretical understanding in the language, meaning, and perspective that form the participants worldview. A practical example from the research is the developed conceptual model which has been used as a basis for the interview guide, and later revised when integrating explanations from data collection. One has also used both data-driven and concept-driven codes during the analysis. Thus, the research is not purely inductive as the researchers look at the interaction between existing theory and empirical data together to generate an understanding of the research topic. Yet, the researchers are aware of the critiques that are built around this approach, for example that the study will be difficult to replicate and statistically generalize (Bryman, 2016).

4.2.2 Research Design

This research uses a qualitative mono-method through a *case study* to produce a comprehensive and detailed description of the challenges that occur during VCC and the strategies used to manage them (Bryman, 2016). Yin (2018) defines a case study as “*an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context; especially when the boundaries between phenomenon and context are not clearly evident*” (p. 18). Thus, one believes that a case study has enabled the researchers to capture the complex nature of VCC in KIBS engagements as each instance of collaboration is unique and thereby can lead to a variety of challenges. It also allowed the researchers to understand the phenomenon in its natural setting, both in relation to contextual aspects and the processes that are performed. In addition, one got insights into the business relationships and factors that potentially inhibited the process towards a mutual value proposition. Moreover, a case study is suitable as the research topic is considered a rather new phenomenon with

limited research in literature (Aarikka-Stenroos & Jaakkola; Kukk et al., 2014; Lessard & Okakwu, 2016; Schwetschke & Durugbo, 2018). As well as it is considered to be the preferred research approach when ‘how’ questions are being asked, because it allows the investigation of a contemporary phenomenon in depth in a real-life context (Yin, 2018).

This case study uses *multiple cases*, i.e. two organizations to explore the phenomenon. Even though several authors argue that case studies involve single cases (Flyvbjerg, 2006), others find that a multiple case study provides the possibility to understand the similarities and differences between the cases (Baxter & Jack, 2008; Stake, 1995). Consequently, multiple-cases are often considered more compelling and valuable than single-cases (Yin, 2018). Another reason for picking two case companies is that different inhibitors and responses may occur depending on e.g. the company’s size, resources, brand, and customer base (Heikka & Nätti, 2018). Furthermore, one gets insights into various aspects of the relationship between service provider and the beneficiary and could therefore uncover new aspects. Even though KIBS engagements often are organized through projects (Ojansivu, Alajoutsijärvi & Salo, 2015), one gets a more holistic view of the inhibitors and strategies that occur during VCC by investigating at a firm-level, as well as it can provide more variety in the data. However, one acknowledges that the context within each firm is complex as the respondents share their experience from different projects to explain the phenomenon and provide various perspectives. Additionally, as data is gathered at a single point in time and with various actors within each case this research can be considered to have a *cross-sectional* nature. Overall, this case study has two units of analysis which each contain interviews with four consultants, i.e. eight consultants in total in Company A and Company B. The former unit also entails two interviews with representatives from the client.

Even though this research design is chosen, there exists other alternative ways to collect data to answer the RQ. A pure *cross-sectional design* could have been applied by conducting semi-structured interviews with consultants in a larger number of firms or projects in order to ensure more variation in the inhibitors and strategies that occur (Bryman, 2016). Yet, this design could have made it difficult to examine the VCC process based on one interview per firm or project. Further, the limited knowledge on the topic makes it hard to gauge variation through a systematic and standardized approach, as semi-structured interviews cannot be completed simultaneously due to its scope and time. Moreover, it could be interesting to combine the conducted interviews with *participant*

observation, as this could allow the researchers to record action as it occurs (Bryman, 2016). This can provide the researchers with hands-on experience and further insights into how challenges and responses are approached at a daily basis, and this way benefitted the credibility of our empirical findings.

4.2.3 Sampling and Case Descriptions

In qualitative research the main sampling method is *purposive sampling*, which refers to the selection of units that are needed in order to meet the need of the study (Bryman, 2016). To specify, the authors have sampled on three levels. Firstly, the researchers sampled within the B2B market, looking at VCC in the context of KIBS. The firms selected for the study adhere to three common characteristics that correlates with the nature of VCC; (1) high knowledge intensity of the service provided; (2) the problem-solving nature; and (3) a strong focus on interactivity and client related aspects. Thus, based on the ways KIBS are working one could assume VCC to occur, hence being an appropriate context for investigating the inhibitors and responses.

Secondly, the researchers sampled the context, i.e. which KIBS firms to investigate further. One used a *generic purposive sampling* strategy by establishing criteria concerning the cases needed to answer the RQ, which have remained the same throughout the research process (Bryman, 2016). One also narrowed down the scope to T-KIBS (Miles et al., 1995), as it has become evident that these types of services are growing and of increased importance (Miles et al., 2018). The researchers thereby followed four criteria when sampling; (1) firm classified as T-KIBS; (2) current engagement in co-creation processes; (3) operating in the B2B market by providing business services; and (4) an innovative approach to consulting. In addition, the conceived cases are perceived as representative or typical as “*the objective is to capture the circumstance and conditions of an everyday or commonplace situation*” (Yin, 2018, p.48), and thereby aim to exemplify the broader category of digital consultancies. With this in mind, a list of nine potential case companies were made, that got further condensed and constructed to a final list of five suitable companies. The respective firms were contacted by email with information about the research, and all the companies answered the request. However, only two agreed to contribute to the research in the end. A description of the two case companies that operate in the Norwegian market is provided in the table below and is gathered from the interviews (Table 6).

Table 6: Description of Case Companies

Case Company	Description
Company A	This firm is a spin off from a large international consultancy, and combine competence within the field of design, innovation, digitalization, marketing, and development to make innovative solutions for their clients. Mainly this is new technology development where one seek to embrace the business as a whole, and focus on providing their clients with excellent experiences to make them grow. Company A has a diverse customer base with both private and public clients, where projects often last from a few weeks to months or years. Out of the four interviewed consultants two worked on public projects that had lasted for more than a year, while the others worked with private actors and on shorter projects that often lasted a few months.
Company B	Company B is a SME that is part of a larger Nordic consultancy, which by combining strategic understanding, technical solutions, and creativity seek to create digital possibilities and value for their clients. The firm is organized into three competency areas, mainly focusing on profiles within design and communication, management consulting, and IT development, with an aim of interdisciplinary work. Company B' customer base exists of private and public actors, but this case study only includes interviews with consultants on projects with private clients. The length of the projects varies from a few weeks to 12-18 months.

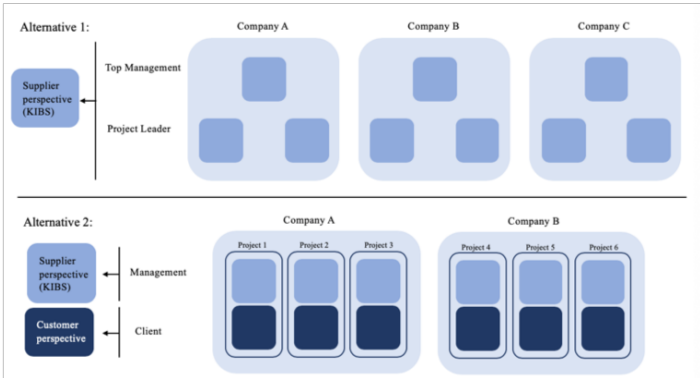
Note. Created by the authors (2019)

In order to ensure informed participants, one used *generic purposive sampling* by establishing three criteria for the participants; (1) the respondent is project leader or manager; (2) the participant is involved in VCC processes or have expressed a personal interest in co-creation; and (3) a willingness to participate and contribute to the study. In addition, one aimed at interviewing clients from both Company A and Company B. Further, as the sampling of participants involved elements of *snowballing*, i.e. practitioners in the case company helped providing interview-objects, a fourth criteria was added; (4) the respondent needs to be identified as a 'reflective practitioner' (Gummesson, 2000). This sampling strategy was chosen based on convenience, as one got access to respondents that had experience and interest in the topic. However, one recognizes the risk that practitioners in the case company can have suggested respondents that credited the firm but based on the data collected such an issue did not appear. One also believes that this was the most appropriate way to gather respondents due to limited time and resources.

Further, the sampling process can be considered sequential as it has evolved throughout the research (Teddie and Yu, 2007). At the outset of the research process the authors proposed two different sampling alternatives (Figure 8); where the first illustrate a pure supplier perspective by looking into how project leaders and top management in KIBS experience inhibitors and strategies. As the

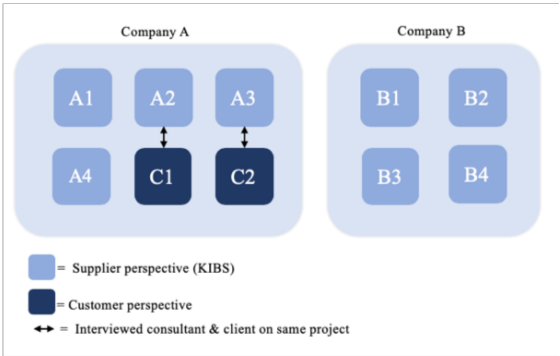
researchers increased their knowledge within the field and contacted potential case companies it emerged a second alternative that appeared to potentially provide broader and more nuanced insights into the topic. The second alternative aimed at exploring the topic through the dyad, i.e. key stakeholders in the provider and client organizations, and one thereby decided to interview three consultants and three customers to get insights into both perspectives of the VCC process. However, it turned out challenging for the researchers to follow this initial sample as the service providers not necessarily where willing or able to provide the researchers with access to their client. The two interviews with these individuals also appeared biased towards a positive end, because the client only disclosed very few and small issues during the collaboration. Thus, as illustrated in Figure 9 the collected sample consists of two case companies, where research adopts a supplier perspective to provide recommendations and guidelines for future situations that may occur during VCC. Subsequently, one did not focus on a wider networked view from the broader service system and the researchers are aware of the limitations of this.

Figure 8: Sampling Alternatives



Note. Created by the authors (2019)

Figure 9: Final Sample & Research Design



Note. Created by the authors (2019)

4.3 Data Collection Method and Analysis

This part gives insights into how the data was collected and analyzed, as well as one discusses the trustworthiness of the findings, through the three research criteria; dependability, credibility, and transferability.

4.3.1 Data Collection Method

To gather data the authors have conducted personal interviews with ten individuals in total. Interviews is the prominent method used in qualitative research and following Bryman (2016): *“qualitative research frequently entails the reconstruction of events by asking interviewees to think back over how a certain series of events unfolded in relation to a current situation”* (p. 494). This allowed the researchers to obtain an understanding of how the respondents at an everyday basis interact with each other in the VCC process, thus, giving valuable insights into the challenges that have occurred and how these are managed. It thereby enabled the researchers to describe the respondents’ experiences, interpretations, and meanings related to the phenomena. Further, this allowed the interviewees to recollect events they experienced as challenging. Interviews are also chosen over other methods such as participant observation because the reconstruction of such events cannot be accomplished by this method alone. Thus, interviews are perceived superior to observation as it in this case gives insights into the interviewees point of view and thought processes, rather than the researcher’s interpretations of such (Bryman, 2016).

As the VCC process can be unique to every involved actor, the researchers chose a semi-structured interview approach to gain an extensive scope of opinions. Semi-structured interviews were appropriate as the researchers wanted to touch upon relevant concepts that already existed in literature to acquire further empirical insight, while at the same time provide the respondents with sufficient freedom and flexibility to express their views and raise new issues (Yin, 2018). Thus, one made a loosely thematic guide with open-ended questions and discussion themes. This approach also allowed to exploit the naturally occurring data and the emergence of unexpected issues, and thus facilitated the abductive approach by allowing theory to emerge inductively, while at the same time looking deductively after existing knowledge. Thus, structured interviews were considered inappropriate as it would be challenging to analyze the complex and dynamic VCC process (Bryman, 2016).

As this research targeted two groups; (1) consultants in KIBS, and (2) representatives from client, the authors regarded it as essential to prepare two different interview guides (Appendix 3 and 4). One focused on being flexible regarding the interview guides in order to be able to ask follow-up and probing questions if the interview took an unexpected turn, and thereby one followed the advices from *“Strategies for Qualitative Interviews”* (*“Strategies for Qualitative Interviews”*, 2017). Bryman (2016) also state: *“what is crucial is that the questioning allows interviewers to glean the way in*

which research participants view their social world and that there is flexibility in the conduct of the interviews” (p.469). During the interviews the researchers took advantage of these features as one did not follow the order of the questions in the interview guide, but rather introduced questions whenever they made sense to maintain the flow of the interview. However, all interviewees were asked questions on the same topics, but were left free to express their own views and experiences with the topic. Overall, one believes that this enabled generation of as much knowledge as possible, as the respondents gave elaborate and in-depth answers. At last, one acknowledges that the five collaborative activities the interview guide followed blended into each other. Although one initially assumed that this structure was needed for the respondents to recollect memories and examples, it became evident that they rather talked about the topic loosely. Yet, one observed that the guide was useful to follow when talking with the clients because they appeared to have less experience and knowledge about the VCC process.

In advance of the interviews the authors recognized that the case companies and their employees might differ in their definition of co-creation, or that they use alternative words like e.g user involvement or co-design. Therefore, the respondents received a mail which gave a brief introduction to the topic and the planned research process. Hence, the interviewees were not presented with the VCC definition used in this research, neither before nor during the interview. The researchers thereby believe that the respondents were uninfluenced by past research. Moreover, one ensured respect and trust in the interviews by highlighting the privacy of the respondents both before and during the interview. As the interviewees requested anonymity, one ensured to disguise participants name, personal information, sensitive project information, and enterprises’ names.

Interviews were conducted in two sequences; the first eight between February 25th and March 4th, 2019 in Oslo, Norway, and the last two March 28th, 2019 via Skype (Table 7). The two last interviews were conducted specifically with consultants after the first data analysis due to lack of data saturation as one needed further knowledge about each supplier and their process. One did not experience any difference in data quality when conducting the interviews on Skype, which can be explained by rather open-minded and extrovert respondents. During the interviews one of the researchers acted as a main moderator, while the other primarily took notes and asked follow-up questions, to build confidence in our *“findings and increase the likelihood of surprising findings”* (Eisenhardt, 1989, p. 538). This way, the insights and observations from both researchers enhanced the richness of the data, as one

complemented each other by asking diverging questions. The interviews were conducted in Norwegian, a wish expressed by the respondents to facilitate fluidity. It is assumed that using the respondent's native language enabled them to provide adequate and reflective answers, since they were able to express their feelings, thoughts, and experience without language being a barrier. All interviewees agreed that the interviews were audio-recorded.

Table 7: Overview of Interview Respondents

Respondent	Supplier/ Client	Date of Interview	Gender	Experience in Consultancy	Company	Type of Interview	Length of Interview
A1	Supplier	25.02.2019	F	11 years	Company A	Face-to-Face	80 minutes
A2	Supplier	26.02.2019	F	13 years	Company A	Face-to-Face	51 minutes
A3	Supplier	28.02.2019	F	9 years	Company A	Face-to-Face	57 minutes
A4	Supplier	28.03.2019	M	4 years	Company A	Skype	87 minutes
B1	Supplier	26.02.2019	M	1 year	Company B	Face-to-Face	58 minutes
B2	Supplier	28.02.2019	M	10 years	Company B	Face-to-Face	60 minutes
B3	Supplier	04.03.2019	M	1 year	Company B	Face-to-Face	88 minutes
B4	Supplier	28.03.2019	M	6 years	Company B	Skype	84 minutes
C1	Client	27.02.2019	F	n/a	n/a	Face-to-Face	42 minutes
C2	Client	28.02.2019	F	n/a	n/a	Face-to-Face	45 minutes

Note. Created by the authors (2019).

Lastly, one believes that ten interviews provided a sufficient data set considering the aim and context of the study, as well as the time and availability constraints. According to Bryman (2016), a 'golden' rule when gathering data in social research cases is ten to twelve interviews. However, this also depends on whether one aims for theoretical- or data saturation. As this research aims for the latter, and as one after eight interviews with consultants and clients saw that new challenges and strategies were emerging, one decided to conduct two additional interviews with one consultant from each side. Although this delayed the research process, it provided the researchers with further empirical insights, but one also noticed that many of the challenges and practices appeared indicating that one in relation to the two cases is close to data saturation. However, one acknowledges that this also depends on the type of KIBS, and that other companies that might be more diverse would experience various barriers.

4.3.2 Data Analysis

This section aims at giving the reader insights into how the researchers analyzed the collected data. After each interview one evaluated the interview which shaped the direction of the research as one continuously made improvements. Additionally, one wrote down the perceived main findings, both in relation to the inhibitors and strategies. Accordingly, the interviews were transcribed in the language conducted, and it can therefore include the researchers' personal interpretation of the recorded audio (Kvale & Brinkmann, 2009). Thus, one carried out verbatim transcriptions where response tokens like "*mhm*", "*eh*", and "*okei*" got included, as well as involuntary and nonverbal vocalizations like the participants laughing, coughing or hesitating as it enabled a sufficient understanding of the atmosphere. Overall, the interviews resulted in a dataset of 190 pages of transcripts, all anonymized. Additionally, the quotes used in this analysis is referred to with both the numbers of respondent and paragraph to specify where the quote can be found in the transcriptions. The data extracts that appear in the analysis is the researcher's own translation, and one have chosen the words and sentence constructions that were most suitable for expressing the original statements of the respondents and the initial meaning can have been affected. In order to minimize the bias, one discussed the statements that appear in the analysis and agreed on the exact wording, as well as they were approved by an external peer. However, one acknowledges that an interviewer bias exists, which may weaken the credibility.

QSR International's NVivo 12 software was used to support the researchers in managing the data and analysis, i.e. with coding and categorization of the codes. The program made it easier for the authors to get an overview of the non-standardized and complex data, as well as it represents a strong empirical foundation. Before the researcher started to code the data, i.e. provide labels to units of data within the transcripts, they agreed upon using an abductive approach. This implies that one combined concept-driven or 'a priori' codes that already were identified in literature (Figure 6) and data-driven codes which are labels that emerged when the researchers revealed new aspects in the data (Saunders et al., 2016). One believes that this was advantageous as it enabled the researchers to have an initial analytical framework and maintain anchor to the existing body of knowledge in the subject area, while simultaneously being able to openly explore that data through new themes or issues (Saunders et al., 2016). The concept-driven codes were thereby agreed upon in advance, while the data-driven ones appeared as the researchers analyzed the data.

In the first stage, both researchers started by reading through the first five transcripts by themselves, thoroughly line-by-line, labelling each unit of data that symbolized or summarized a valuable meaning that could help answering or bring an interesting light towards the RQ. Then the researchers met to discuss their understanding of the data and categorized the data- and concept-driven codes. In this way one could reveal if one interpreted the codes' content or meaning in the same way, and it became easier to code the next transcripts. One also revealed that some units of data overlapped and could refer to several codes simultaneously. Afterwards, the researchers continued to analyze the next three transcripts, before one revised the interview guide before the final two interviews. By coding and categorizing each piece of data one made it accessible for further analysis. When all transcripts were coded, the researchers again reviewed the codes and started to categorize them further into themes with several sub codes. Moreover, one 'cleaned up' the codes and uncoded units of data that appeared misleading. One went through all the data together before writing the analysis to agree on the most important aspects. The final coding scheme is provided in Appendix 8.

4.3.3 Research Criteria

Social research is traditionally evaluated by looking at three criteria; validity, reliability, and replicability. However, there has been discussion among qualitative researchers concerning the relevance of these criteria for qualitative research (Bryman, 2016). Some consider them appropriate measures (e.g Yin, 2018), while others argue that these criteria are both philosophically and technically inappropriate based on the interpretivist assumption that qualitative research adopts (e.g Saunders et al., 2016). Thus, as this research regard the social world as constructed and multifaceted, one adapts an alternative position by looking at three criteria related to the *trustworthiness* of the findings; *dependability*, *credibility*, and *transferability* (Lincoln & Guba, 1985).

Dependability (parallels with reliability) refer to the consistency of the measures. It has been difficult to confirm the accuracy of the findings through an audit trail (Lincoln & Guba, 1985), but the researcher's supervisor and an external peer have guided the authors towards keeping consistency and coherency. Additionally, one has ensured inter-observer consistency as both researchers participated in the interviews and analyzed the data (Bryman, 2016). One has also sought to document the process between the researchers through *intercoder reliability* in NVivo 12 (Appendix 8), which refers to "*The extent to which two or more independent coders agree on the coding of the content of*

interest with an application of the same coding scheme” (Lavrakas, 2008). In this research the percent agreement is high, between 96.32 and 99.87, which indicate that the researchers consistently have identified the same variables to occur. However, it is more useful to look at Cohen’s kappa which indicates how much of the same text the authors have coded in one node. This research has an overall unweighted kappa of 0.66. One considers this to be good in respect of the researchers limited experience. When reflecting on the percentage, one observes that different coding is often explained by one of the researchers including the context and question, while the other coded more specifically. Yet, it was crucial that one agreed on and discussed the coding scheme in advance as this can have made the coding more consistent. Further, one believes that analyzing ten interviews in an intensive period made it easier to achieve a satisfying intercoder reliability.

Credibility (parallels with internal validity) concerns the notion of how believable the findings are, i.e. is there a match between the representation of the interviewees socially constructed realities and the respondent’s intention (Saunders et al., 2016). To reach high credibility the research has been carried out according to the principles of best practices. Therefore, the researchers developed a conceptual model to get an overview of the existing knowledge in the field, but also used the interviews to ask open questions that could give insights into other issues that not yet were found. In this way, the authors tried to be open towards what the research actually revealed rather than what they thought in advance of the data gathering. However, one acknowledges that there is a risk of biases when collecting data. For example, the interviewer’s behavior and wording can have affected some responses. For instance, in relation to supplier arrogance the respondents were told that this is a theoretical phenomenon and then asked about their familiarity with the topic. In some cases, this made the respondents state “*Yes, absolutely!*” (A1, 157) while in other cases the respondent declined the phenomenon, e.g. B1. Thus, as the research progressed the researchers rather asked the consultants how the client perceive consultants in general, and one revealed that the characteristics of arrogance also appeared through this setting. There were also other situations where the researchers unintentionally asked closed questions, e.g. if the respondent mentioned a challenge. Moreover, it is worth mentioning that one could suffer from respondent- and social desirability bias, i.e. respondents provide answers that are socially desirable to create a more favorable profile of their participation (Saunders et al., 2016). As this research is centered around a challenging and potentially negative angle of the VCC process, one recognizes that social desirability bias can have occurred as respondents can have chosen to not reveal or discuss aspects of the topic, either because it was

sensitive information or because it discredited the individual. This became an issue when interviewing the clients, as they were unwilling to reveal challenges with KIBS, which then resulted in a change of sample (Figure 9). Further, the interviews were also transcribed thoroughly (Appendix 5, 6, 7), and then showed to the respondents for validation (Bryman, 2016). NVivo 12 was used to store, organize, and analyze the data, providing comprehensive data treatment and inspection. To increase the credibility even further the researchers could have triangulated the primary data with secondary data, e.g. reports from the case companies. This could have increased the level of knowledge and strengthen the researcher's standpoint (Bryman, 2016).

Transferability (parallels with external validity) relates to whether and how the inhibitors and responses that are revealed for the VCC process is applicable to other KIBS-client relationships (Bryman, 2016). Generally, there is a concern of the transferability of findings in case studies due to their contextual uniqueness (Saunders et al., 2016). However, this research show that the presented challenges and responses are evident in two cases, where each is examined thoroughly, and the findings provide a temporary and realistic perspective on the given subject at the time of investigation. Consequently, one claim for analytic generalization as one assumes that several of the findings can appear in other VCC processes because of the industry wide knowledge of the respondents (Bryman, 2016). In spite of this, one recognizes that statistical generalization is not possible or the purpose, and one would like to emphasize that the findings of this research may not be present in P-KIBS. In addition, several of the findings from this research relate to existing theory, which indicate that the findings have a broader theoretical significance than the case alone: *"Knowledge cannot be formally generalized does not mean that it cannot enter into the collective process of knowledge accumulation in a given field or in a society"* (Flyvbjerg, 2006, p. 10). Moreover, in accordance with Lincoln and Guba (1985) the researchers have provided thick descriptions of the whole research process to give a richer and fuller understanding of the research setting, and one has kept complete records from all phases by e.g. saving all previous version, audio files, and transcriptions. One believes that this makes transferability judgements of the findings possible.

5.0 Analysis

The purpose of this section is to make sense of the collected data in order to be able to answer the RQ. The first part of this chapter deals with the VCC process and justifies why the two researched cases are examples of VCC. Then one identifies the inhibitors that occurred and practical solutions to these, before subsequently exploring the five overarching strategies that appeared as responses to inhibiting situations in VCC. The respondents from Company A are presented as A1- A4, Company B as B1- B4, and client as C1 and C2. The number after each quote indicates where it can be located in the transcriptions.

5.1 The Value Co-Creation Process

Aarikka-Stenroos and Jaakkola (2012) suggests the VCC process to consist of five collaborative activities; (1) Diagnosing needs; (2) Designing and producing the solution; (3) Organizing the process and resources; (4) Managing value conflicts; and (5) Implementing the solution. These five activities are recognized to exist in Company A and Company B. The upcoming section starts by describing some common aspects of the VCC process, before each firm's VCC process is explained.

5.1.1 Common Aspects of the Value Co-Creation Process

This section entails the description of three aspects that appeared to be important both in Company A and Company B to increase the chance of managing VCC successfully; trust, iterative work, and interdisciplinary teams. These elements are characteristics of the VCC process in the two cases of T-KIBS but trust also appears to be the foundation for the collaboration. Thus, the aspects do not particularly concern management of inhibitors, but rather influence the process positively.

5.1.1.1 Trust

In line with Zieba and Pawel (2017) this research has revealed that building a trusting partnership is of great importance, especially in the early stages of collaboration (A1, A3, B4). A4 expresses similar views as Følstad (2017), Franklin and Marshall (2018), and Scarso and Bolisani (2011, 2012), confirming that trust is a necessary and essential precondition for the KIBS-client relationship. He

argues that trust is the foundation of value creation, and if trust is absent the relationship will be challenging, and one might not be able to deliver an optimal final result, which is supported by B1: *“If you lack trust you won’t achieve anything”* (B1, 161). A1 adds that the fundament of trust makes dialogue and discussion easier, and A4 state that the customer needs to have confidence in that the consultants will manage and lead the VCC process in the right direction. Some consultants (A3, B2) also emphasize the importance of clients showing trust, as it creates motivation, a safer working environment, and a liberating feeling as one can make good decisions on behalf of one another.

Further, it appears to be a connection between trust and repurchase among clients as the relationship already is established (A1, A4), and A1 add: *“It is a unique situation when your relationship with the client is established to the point where you can just come back and quickly feel the sense of camaraderie. With new clients however, it takes time”* (A1, 74). Consequently, *“Trust is not built in a day, you need to earn it over time”* (A4, 131), which is supported by both A1 and C1. Moreover, the consultants (A2, A3, A4, B3, B4) specify that freedom to explore often is a result of trust, and that it enables them to perform better, as also emphasized by Franklin and Marshall (2018).

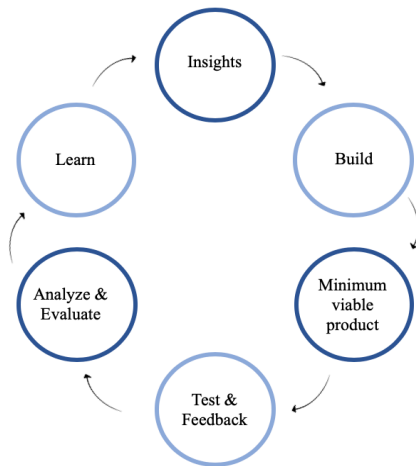
5.1.1.2 Iterative Process

In line with Aarikka-Stenroos and Jaakkola (2012) this research has identified that the five collaborative activities of the VCC process are iterative i.e. they cannot be analyzed separately as they co-occur and are overlapping. All the respondents highlight the process as highly iterative and incremental, mainly referring to Agile software development techniques like Lean and Scrum with short feedback loops and adaptation cycle.

In Company A, A3 describes the iterative way of working as a ping-pong match, while A1 express that projects are like loops; one work circular with an area (Figure 10). This is in consonance with Kukkk et al. (2014), who described the process as dynamic rather than linear or flat. A1 explicitly states that working iteratively is a focus area of hers, and that it includes continuously involvement of the end-user through insights and testing, and gradually launching small parts of the solution. This enables reflection along the way, which can be perceived as a form of risk management in relation to time and resources. Consequently, she exclaims *“My dream for the future is that a project plan will look more like a circle than a line”* (A1, 76). However, several consultants (A1, A2, A4) stress that

all projects should adopt iterative elements, but that the degree of iteration varies between projects emphasizing that more technical projects often use more agile methodology. A3 express that the clients do not object to work iteratively, but C1 state that it was a transition for her to get used to the method which she currently is more positive to and see the value of.

Figure 10: Iterative Process in Company A



Note. Created by the authors (2019), adapted drawing from A1

Company B agrees on several of the points made by Company A, and B3 explains the iterative circle like A1 in Figure 10. As a result, they constantly receive fresh user insights which leads to further problem-solving cycles, and he adds that they work in sprints, i.e. fixed periods of time where the team complete specific tasks. Further, B2 prefers agile due to its constant validation and shorter phases but points out that the industry is lacking a common understanding of what it means to work like this. He states that most consultancy firms work agile, but that many do not know how to ‘walk the talk’, making it challenging for clients to understand the process. He further explains his view: *"It is about reducing the time of planning. Instead of looking at a two-year perspective, you plan for a week, or maybe a month. And then you evaluate the result and adjust the course along the way towards the goal you want to achieve"* (B2, 68).

5.1.1.3 Interdisciplinary Teams

Mustak (2018) claims the importance of including people from different business functions to ensure a broad perspective, which was confirmed by all respondents. Consultants from Company A (A1, A2, A4) is of the opinion that interdisciplinarity is essential, as: *"Even a psychologist can be the most*

influential in deciding on a future strategy" (A1, 163). The consultants explain that interdisciplinary teams consist of team members from both parties with a diverse background within e.g. design, technology, and business. A4 emphasize that it is important to complement the client's knowledge gaps in the team. He also mentions that the team members not necessarily need to be formal experts in the field, as the informal experts can be more open to creative processes. B2, B3, and B4 indicate that Company B aim for interdisciplinarity, but B2 tell that this is more challenging than they expected because interdisciplinarity is easier to talk about than execute and continues: *"I perceive it as a challenge among consultancies to break down the professional silos"* (B2, 66). Moreover, he exclaims the importance of interdisciplinarity for digital projects, as he believes that this contributes to the likelihood of successful KIBS-client collaboration. At last, he argues that it is easier to create interdisciplinary project teams when clients have experience with consultants, and when the client's organization is of considerable size.

5.1.2 Company A' Process

Company A explains that they get new projects either from existing customers or from firms who contact the consultancy directly. Assuming that Company A is chosen, A1 and A4 tell that one engages in an extensive dialogue where one **organizes resources and process** by clarifying scope, budget, resources, and mandate. This is formulated into a project description and plan, and one of the clients (C1) mention that consultants drive the process hereafter. However, the majority of the consultants (A1, A2, A4) specify that the ones who order the project are not the same people as those involved in the project. Therefore, the consultants need to include the entire organization, and stay aware that there exists a variety of realities and motives that influence their process. Hence, a reflection from A2 is: *"A customer is not only one person, but rather exist of many different stakeholders with various views and power"* (A2, 16). As a result of this, A1 and A4 tell that they start each collaboration with a kick-off where one gets a common understanding for the task at hand.

In accordance with Aarikka-Stenroos and Jaakkola (2012) the consultants (A1, A2, A3, A4) tell that they start by **diagnosing the client's needs**, emphasizing that they need to understand the task in an objective and thorough manner by creating a target and vision for the client's future. A1 tell that one need to reveal what creates value for both the client and the end-user, and a natural starting point is to step back from the solution in order to build a Minimum Viable Product (MVP) on facts.

Accordingly, A2 usually gather insights in two steps. First, to create credibility in the organization, the consultants obtains an overview of already existing documentation, such as firm- and industry specific information, and existing strategies and goals. This is important to relate the project to the firm's' business model (A1) and avoiding to 'reinvent the wheel' and perform activities that are redundant. Secondly, the consultants seek to extend the understanding of the task by performing activities perceived as value-adding. Examples of activities are workshops, interviews, and observations where the clients and consultants collaborate to obtain understanding of the perceived target and reality (A1, A2, A3). A4 adds that the essence is to understand the client's organization on a both a deep and holistic level. Moreover, in line with Mustak (2018), the consultants (A1, A2, A3) underline the importance of engaging a broad range of actors in this activity, as it provides the team with an extensive understanding of the impact of the solution. A2 specify: *"One need insight into the world and reality of the end-user, not the world the client want them to be in. You need to have an outside-in perspective and understand which language they use, where they get information from, and what they hear from their grandmother, friend, or colleague"* (A2, 110). A1 and A2 experience that the discussion and exploration of different directions often results in several iterations of learning and one create several alternative solutions that fits the client's budget and ambition level. They stress that these directions often are blended, and that customer impatience can make it challenging for the consultants to find enough time to execute this activity properly, contradicting Kukk et al. (2014) who state that the client acknowledges the importance of this step.

Continually the team enters a creative phase where they seek to **design and produce the solution**. A1 stress the importance of being creative but realistic, and tell that this step is centered around the creation of a MVP. This MVP follows the team through several iterations where one first test on paper, before creating a digital prototype the end-user can test. A4 tell that they mainly carry out qualitative interviews and user tests to get insights into the end-user's reflections around the experience. For further verification, A4 insists that one can use quantitative methods, but specify that this is time consuming. Additionally, insights from other experts, cases, or own experience is used to support the consultants and their credibility. The clients (C1, C2) add that they are familiar with such activities and they perceive that the consultants are preparing them to make good decisions in challenging situations.

In agreement with Aarikka-Stenroos and Jaakkola (2012), Company A states that both parties might be responsible for **implementation**, depending on the client's capabilities. However, A1 emphasize that she prefers to be involved at this stage to achieve the optimal ViU. A3 brings in an interesting perspective by telling that one often develops the solution gradually through several smaller deliveries, indicating that there not necessarily is an apparent implementation phase. The customers (C1, C2) also confirms Kukk et al. (2014) by telling that they perceived implementation as an inseparable part of the service delivery. After this stage, A1 and A4 highlight the importance of evaluation and follow-ups with clients to reveal if repurchase is possible. Overall, the consultants stress that one need to **manage value conflicts** throughout the process.

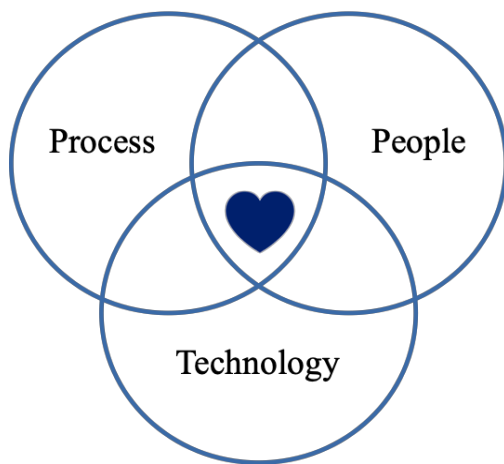
5.1.3 Company B' Process

Company B agrees with Company A in relation to **organizing the process and resources**, and B4 emphasize the importance of taking time to get an understanding of the task at hand in order to prevent frustration or a poor service delivery. Hence, extensive communication with both the decision-makers who ordered the project and the collaborative team is needed. The actors should set principles that can guide the collaboration together to ensure that one have a broad understanding of how the organization perceive the task at hand. B1 highlight the importance of formalities as one need to ensure frames and structure on how the project will be executed, and B3 tell that one need to give the client an understanding of how one works most efficiently.

When **diagnosing needs**, the consultants need a considerable amount of time to understand the end-user and their client's business to be able to solve the task in a satisfactory manner (B1, B3). This implies that the consultants (B3, B4) need to understand the client at a deeper level, and B3 describes: *"We should understand their business, their goals, and which obstacles that hinders them in achieving these goals"* (B3, 141). Thus, this activity involves investigating existing documentation, qualitative interviews with relevant actors, and potentially quantitative market research (B2). The collected insights are used as a starting point to formulate specific goals and a vision for the project (B3, B4). However, B2 emphasize the importance of recurring insight collection throughout the whole process by focusing on one task at a time and continuous validation. This activity involves knowledge transfer between the parties, and B1 specify three essential elements that should overlap: people, process, and technology (Figure 11). He explains that one need to combine knowledge from

these three pillars in order to be able to cover the tiny area in the middle, which enable them to deliver good projects. In this regard, it is important to educate and motivate the involved people, organize and understand the process they are involved in, and use the suitable technology. Thus, the area will not be reached if the customer is absent throughout the process.

Figure 11: People, Process, & Technology in Company B



Note. Created by the authors

The team now enters the activity where they **design and produce the solution**, and the consultants facilitate design of suggestions that are carried out and tested with the end-users, with the client as observers (B3). In this way one rapidly gives the client an understanding of the methodology the consultancies use and the effects of it (B2), and B3 tell that user tests are guiding when making decisions as one is able to avoid big and time-consuming discussion by stating what the end-user actually responded. He adds that each iteration ends with a review of the last accomplishments and how one can improve, i.e. sprint reviews. In relation to the **implementation** phase, Company B agrees with Company A; the client sometimes implement the solution by themselves, and occasionally together with KIBS. B1 adds that it is common that digital solutions are not 100 % completed when the project is implemented, as they are in constant change. He thereby argues that the client's effort should be higher towards the end of the project, while the consultant's contribution gets increasingly redundant throughout the process. At last, all the consultants in Company B emphasize that one continuously need to manage potential **value conflicts**.

5.1.4 Cases of Value Co-Creation

To understand whether the two cases can be examined as examples of VCC beyond the described process, one look into how the respondents describes co-creation and the how they perceive value to be created. In Company A, all the consultants (A1, A2, A3, A4) describes co-creation as what they are doing on a daily basis. They create value with their customers and other stakeholders, and A1 particularly emphasize that she connects the term to the involvement of the clients' end-user to create unique value propositions. She also makes the reflection that co-creation is related to the development of relational capabilities through trustful dialogue with the client. Moreover, A4 illustrate co-creation as: *"1+1=3; by combining the client's deep context-specific knowledge and the consultant's way of working one achieves much better results than in projects where one does not co-create"* (A4, 153). B1, B2, B3, and B4 agrees with Company A, and states that co-creation is about creating something together, both by emphasizing the relationship between KIBS and client, as well as other actors. B1 and B3 supports A4 statement, and particularly highlight that it is not just about the consultancy offering specialized knowledge, but also about the beneficiaries who needs to provide space and leeway to the consultants within the organization to create value.

Furthermore, all the respondents agree that value is created in collaboration between KIBS and client. Company A (A1, A2, A3, A4) state that there is a high degree of VCC by telling that co-working is the basis of solving the task. A1 even state that doing projects without co-creation makes no sense, and together with A3 and A4 she emphasizes that client involvement is crucial. Moreover, A4 outline that consultants only can offer the client value propositions, thus that the success of the process depends on the client and their involvement with their end-users. It thereby becomes evident that: *"We are totally dependent on the symbiotic relationship that we obtain by working together, and the effect of it, as we can combine the client's knowledge, experience, and ownership with our specialized competence"* (A3, 140). Additionally, A4 points out that one can co-create to different extents, which is confirmed by the clients (C1, C2).

Data from Company B is similar to Company A, as B1, B2, and B3 mention that they solve the task together with the client. Specifically, B4 state that their ambition is to create solutions that the client themselves can take ownership of and be proud of presenting. Additionally, B3 points out that consultants should become a natural part of the client's environment and brings an interesting viewpoint of VCC by stating that in customer-driven projects one can only create value in line with

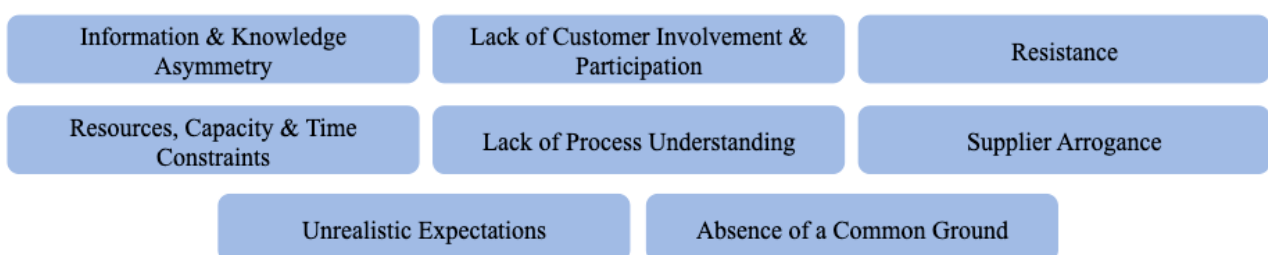
the clients wishes. However, B2 acknowledge: *“It is our task to facilitate co-creation and we can always improve as this is what the client really pays for”* (B2, 165). This is supported by A4 who pinpoint that consultants continuously learn more about how the process best can be facilitated towards success.

Another interesting aspect that several consultants (A1, A2, A3, A4, B2, B3) raised in regard to VCC, is a perceived shift within consultancy the last decade. They explain that KIBS no longer can deliver projects by receiving specifications, meeting the clients, and in the end make a solution without client involvement. Thus, rather emphasizing that projects are collaborations where the parties continuously co-create value. A4 points out that the former way used is less efficient in regard to the client’s resources and that it becomes challenging to respond to ever-changing market conditions. Although the consultants try to introduce their clients to a new way of working that adapts a SDL, B3 underline that some clients still seem to have a more good-centric view by expecting an ‘order and deliver’-mechanism. As a customer himself he made mistakes by having this mindset, and he therefore pinpoint the importance of experiencing the journey together with the client. At last, A4 highlight that this shift towards the spirit of co-creation can cause new challenges since involvement of multiple actors is crucial for the project’s success.

5.2 Identified Inhibitors

This part encompasses the challenges that are identified to occur during the VCC process, as shown in Figure 12, as well as it entails practical solutions the consultants have suggested. The overarching strategies that can be used to manage the inhibitors will be presented in the next section.

Figure 12: Identified Inhibitors in KIBS Engagements



Note. Created by the authors (2019).

5.2.1 Information and Knowledge Asymmetry

Several authors (Aarikka-Stenroos & Jaakkola, 2012; Gummesson, 1978; Kukk et al., 2014; Thakor & Kumar, 2000; Ojasalo, 2001; Wood, 2002) indicate that information and knowledge asymmetry is one of the main challenges in VCC in KIBS engagements. However, the majority of the respondents (A3, A4, B1, B2, B3, C1, C2) do not perceive this as a hinder, but rather as a natural and inherent part of the service delivery. This implies that the client and consultants possess different types of knowledge, and one can confirm that KIBS mainly are engaged to solve tasks that are impossible or inefficient for the client to solve with internal resources (A4, B1, B2, B3, C1, C2). The respondents describe each party's knowledge base in the following way; the consultants possess expertise on how the task can be solved, either strategically or through digital product development and design (A3, B2, C1), while the clients are experts on the context in question (A3, A4, B2, B3, C1, C2). C1 elaborates: *"As client, you know what has worked well previously, and what has not, which is essential knowledge the consultants need to create something new"* (C1, 167). However, A2 perceives that the client often finds the consultants expertise as ambiguous.

In agreement with Lapierre (1997), Mitchell (1994), and Ojasalo (2001), this research have identified that clients often have a limited perception of what they need when they approach the consultancy (A1, A4, B2). A4 exemplifies with a customer who communicated that they wanted a solution for the SMB-market, adding that this is a common issue: *"It is of particular interest that clients often do not know what they exactly need help with"* (A4, 18). B2 joins this discussion, stating that he perceives that the clients in the majority of the cases have a limited idea of what they are buying. He connects this to the organizational decision-makers which often belong to a generation with limited understanding and competence within the digital domain. Thus, in order to increase clients understanding and formulate the specific need, A4 suggest that one can do 'Territory Mapping'. This is an exercise where one involves different actors from the client in order to get an overview of the task. The participants are provided with post-its notes where they write down their reflections, which later are organized on the wall in to clusters that can represent an interesting area to explore further. A2 explain a similar exercise.

Another consequence of the imbalance between specialization and skills is an inability to make decisions among clients regarding direction and prioritization during the project (A3, B2). Moreover, C2 points out that it is challenging to objectively evaluate alternatives, but that she trusts the

consultants to guide her towards the most optimal choice: *"I have learned to trust those with expertise. I have to trust them, because I can't understand everything by myself"* (C2, 62). B2 and B4 also emphasize this challenge, and B2 exclaims: *"I experience that the client do not fully understand the decisions they make, nor the consequences of them. This is unfortunate because they have first-hand knowledge on their end-customers and the needs of the organization"* (B2, 68). C1 does not recognize this issue and tell that she feels competent enough to make decisions. However, B1 indicate that there can be a connection between the ability to make decisions and the length of the project, and he emphasize that customers often make less optimal choices in the beginning. He therefore highlights the importance of knowledge transfer for a functioning collaboration.

In consonance with Bettencourt et al. (2002), A1 highlight the importance of information and knowledge sharing for a successful collaboration. The data shows that the clients often are open and willing to share information both in relation to their expertise and the market conditions (A1, A3, A4, B2, B3, B4, C2). However, it is important that they understand the purpose of sharing it (A3, A4, C1), and B3 tell: *"They understand that we have a duty of confidentiality, and that we would never run to their competitors with the information"* (B3, 118). C2 and C1 also emphasize that it is natural for them to share their knowledge as they are co-located, which improves the end-result since it opens up for continuous small clarifications. A3 add that working interdisciplinary and co-located can decrease the asymmetry. However, B2 pinpoint that this can be influenced by the individuals one work with, as some find it especially challenging to share tacit knowledge, like C2. Overall, B3 experience: *"They like to share, but lack control over what they possess, and it is therefore challenging for them to locate the information. Much of it is experience-based or verbally shared between the employees, almost like a fairy tale tradition; they have walked around telling stories, but nobody has ever written it down"* (B3, 116), thus indicating that it is an issue that the client often lacks structure and documentation.

Yet, it becomes evident that the client can be reluctant to share political and sensitive information which is not available to the entire organization (B3, A4). B3 has previously been told *"Do not say this to anyone, but our intention is to reorganize"* (B3, 118). A4 tell that sensitive information also concerns information that creates a dependency to the project, which thereby can challenge value formation and be unfortunate as it becomes challenging to coordinate the resources in the best possible way (A4). Moreover, it becomes evident that information and knowledge sharing can occur

in informally if the consultant and client know each other well (A4). With a personal connection the client can feel that: *“I can tell you what is going on, you are working with me, and I know you want the best for the firm”* (A4, 66). Hence, it is essential to establish close relationships with key stakeholders to gain the needed information to work efficiently. B4 also emphasize that one can obtain valuable knowledge by the coffee machine, if one is trusted. B2 describe: *“Involvement and communication is essential to be able to share knowledge across organizational silos”* (B2, 170).

5.2.2 Resources, Capacity and Time Constraints

Research by Heikka and Nätti (2018) indicate that it essential for KIBS to offer the right resources for the task at hand, in order to create value, trust, commitment, and economic satisfaction among clients. However, this research show that this is more challenging than expected. B4 tell that signalizing the specific scope to the client is hard as one has a limited understanding of the situation in the beginning. B2 trace this back to the information and knowledge asymmetry between the parties and emphasize that one of the most challenging tasks as a project leader is to articulate and make the client understand the scope, i.e. the resources and time needed, which B1 also acknowledge. Consequently, B4 argues that resource allocation is the biggest challenge in KIBS-client collaborations. The consultants in Company A agree with Company B, and A4 state: *“Most customers underestimate the needed resources and capacity to develop and launch a digital service in 2019. They often assume that they just need a couple of developers before they can kick-start the process”* (A4, 74). However, A2 point out that this also depends on the customer and their experience within the digital field, and A3 tell that by involving experts one can increase the client’s understanding of the time and resources demanded. Overall, within this challenge the respondents particularly touch upon four aspects that will be further explained; (1) capacity; (2) competence; (3) lack of role clarity; and (4) distance.

(1) Capacity refer to the participant’s engagement in the project, which according to both case companies is regulated as a percentage of their total working hours. A1, A2, A4, B1, B3, and B4 state that capacity often becomes an inhibitor as the participants mostly have their ‘normal’ job besides the project. B1 illustrate: *“You will get snowballs thrown after you if you suddenly abandon on 50% of your daily tasks. Your daily tasks will pile up, and you end up using more than a whole weekend to complete them”* (B1, 186). This hinders the project’s progress, as it creates uncertainty among the

consultants and weakens the team's ability to co-create (A2, B1, B3). A2 explains that such issues often escalate over time when the team members concentrate on too much simultaneously. B3, which previously have worked on the client side, acknowledge that this also was a problem in his previous projects, as lack of an understanding of the resources required lead to delays and dissatisfactory results. C2 also confirm that having adequate amount of time can be challenging and makes her ability to contribute to the team limited. However, as the consultants are hired to pursue something the client is unable of accomplishing, the consultants must respect the client's time by not involving them in everything (A1, B1, B4). It can therefore be beneficial to think creatively about how one use the time with the client, e.g. by juggle between the regular, fixed meetings and other activities, such as interviews and testing (A1). Moreover, Company A specify that **(2) Competence** can be a barrier as one always run the risk of getting participants with a different profile than requested, and A1 exclaims: *"Sometimes it is a complete mismatch on chemistry or expertise, and it is essential to be honest in regard to this. Occasionally, the desired people do not match the needs of the team as initially thought"* (A1, 204).

The data indicate that the participants need a sufficient understanding of their role and responsibilities, thereby that **(3) lack of role clarity** can inhibit VCC, which is in line with existing research (Aarikka-Stenroos & Jaakkola, 2012; Bell & Eisingerich, 2007; Bettencourt et al., 2002). The challenge is mainly identified in Company B, and B1 tell that it is important to clearly state which roles are needed, which tasks are connected to them, and which elements might overlap. The inhibitor often occurs in the beginning of the project due to lacking internal communication (B1, B4), exemplified by a project leader who misunderstood her task due to not getting clear instructions beforehand. However, A2 point out that lack of role clarity can arise if conditions change along the way and exemplifies that they got an additional product owner from the client, which caused confusion in relation to the consultant's role. She thereby brings forward that consultants also needs role clarity, which is supported by B3 and B4. B4 emphasize that it is important to anchor the mandate and role not only at several levels in the organization but also among the employees the consultant will interact with on a daily basis, in order to avoid disagreements. Additionally, A4, B1, and B4 explicitly state that **(4) distance** between the parties can cause a number of unfortunate events which can be avoided by being co-located. The importance of colocation was also emphasized by A2, A3, B2, and B3.

Overall, the respondents suggest several practical advices the consultants can use to manage these issues. Firstly, A1, A2, A4, B2, and B4 state that it is crucial to discuss the scope as early as possible. If issues occur, orient the customers on which consequences this may get: *“We are going to deliver the best possible solution to you, therefore we need your help”* (B2, 89) as this will create trust (A1). A2 joins this discussion by adding that it is important to discuss how the consultants mandate can be expanded in order to solve the lack of resources. Secondly, both companies emphasize that it is essential to have participants that are dedicated and involved and claim different percentages as ideal; A4 points out that optimal resource allocation is when clients provide the team with full-time employees, i.e. 100 %. B3 agrees, while B4 acknowledge that this is not always possible: *“The most important thing a client can do to ensure a successful project is to facilitate that the involved people are given at least 50% of their work hours to the project”* (B4, 61). A1 further tell that a certain percentage of involvement is needed to respect the individual, in relation to their time and feeling of accomplishments. Another potential solution emphasized by Company B is direct contact with the participant’s manager to ask for more capacity. B1 also tell that it is of great important to clearly state the critical lines for the project’s success in order to ensure that important stakeholders outside the project can be included. Further, B4 specify that one should rather suggest more resources from the client than the consultancy, and if not discuss what consequences it will raise for the final result. He exclaims: *“We can easily insert more consultants into the team but that is not optimal. We lack competence on some of the tasks related to their systems and routines, which demands a different competence than we offer”* (B4, 133).

5.2.3 Unrealistic Expectations

Aarikka-Stenroos and Jaakkola (2012) proposed that unrealistic expectations are quite common within KIBS engagements, something that is confirmed by the consultants in both Company A and Company B (A1, A3, A4, B2, B3). B2 and B3 tell that customers often have unrealistic expectations in regard to the results that can be achieved at the current level of investment. In these cases, A4 emphasize that it is important to use examples from previous experience that the client can recognize themselves with, in order to lower the expectations. He exemplifies with a smaller Norwegian bank which sought to deliver as the market leader, but only wanted four consultants doing the same as 500 people did on a daily basis at the market leader. Both A3 and A4 state that one should therefore discuss cost and complexity in relation to the potential benefits, and as a result lower the expectations.

Company A and Company B point out that it is important to manage the expectations throughout the collaboration. However, B2 exclaims that there are many projects related to digitalization that lack focus on how benefits will be realized. A2 joins this discussion by stating that the client not necessarily have unrealistic expectations throughout the project but that they are demanding. C1 confirms: *"I have had high expectations because I know I work with competent people. With these great people I expect us to create excellent things of high quality"* (C1, 133). However, both clients indicate that the consultants meet their expectations. Additionally, A3 and B3 add that the expectations of the participants in the team often get more realistic as the process evolves since the client gets hands-on experience with the solution, but that other stakeholders may still have unrealistic expectations.

A1, A2, and A4 also emphasize that whether clients have unrealistic expectations depends on the specific individual, as well as the firm's previous experience with consultants, which is supported by Company B. Several consultants (A1, A2, A4, B2, B4) describes that clients fall into two main categories; 1) experienced; and 2) inexperienced. The experienced clients often have experience from working with a variety of different consultancies, and A1 state that they know specifically what they can get from whom. This implies that it becomes a higher pressure on efficiency, costs, and structure. A4 state that this specifically occurs if they work with individuals that have experience as consultants themselves, and B4 adds that these often are more open, but simultaneously more critical and demanding as they 'know' the profession. Moreover, B2 add that it is easier to distribute the tasks and work interdisciplinary when one meet clients with experience from before, and A4 tell that one thereby need to align the consultancies process with what the client prefer from their previous experience. Thus, experienced customers are perceived to be more demanding with overall higher expectations which affects how one work with the client (B4). Inexperienced customers, on the other hand, is according to A2 often more positive, respectful, and naive. This group represent the majority of Company A and Company B' customer base, as A4 and B2 express that most participants have limited experience from working with consultants, digitalization, and on projects in general. A1 describes working with inexperienced customers: *"I would describe it as adult education. You need to guide them through the process by holding their hand, which often involves telling them whether something is realistic or not"* (A1, 84).

5.2.4 Lack of Customer Participation and Involvement

In agreement with Aarikka-Stenroos and Jaakkola (2012) and Santos and Spring (2015), this research have identified lack of customer participation and involvement as an inhibitor to successful collaboration in VCC (A1, A2, A3, B1). Customer participation and availability appear as a fundamental factor that can be considered a prerequisite for the collaboration (A1, A2, A3, B1). A1 explains that there is a common misconception that clients disengage when the consultants show up, which is unfortunate. Several consultants (A1, A2, A3, B1) reflect around that clients want and are motivated to participate in the process, but that they often lack the capacity and time to be extensively involved. Most clients find it enjoyable and somewhat fun to be involved in the projects, as most of the client's employees enjoy working with something new (A4, B1, B3), which is confirmed by C1 who tell that she finds it very exciting and educational to be included. However, all clients are different; some clients want to be extensively involved, while others find it annoying (B4). A1 and A2 add that low priority of the project in the client organization can also lead to lack of participation.

Lack of customer participation can raise several significant issues. First, the customer will find it difficult to make good choices as they have not been necessary involved, which can result in the consultants making decisions on client's behalf which is not optimal (A1). Second, low participation gives a slower progress due to lack of needed clarifications and guidelines from the client during the process (A2, B1, B2, B3). Third, relevant discussions with the client can be absent, which is an issue since the client knows its needs and end-customers best. It is emphasized by A2 that one need to be clear from the beginning how much participation is needed, as participation can provide the client with (1) knowledge and experience; (2) lower project costs; and (3) increased influence and power. B1 supports the first mentioned aspect and emphasize that his client through training and education has become able to create their own processes. However, if the client cannot participate actively one need: *"Mandate to make decisions. The client has to put their organization to the consultant's disposal, in order for them to not be working completely 'in the dark'"* (B3, 111).

Several consultants (A2, A4, B1, B2) associate low participation with lack of ownership, as there is a close connection between the amount of work the client do and the ownership they feel towards the project. B1 argue that ownership is a natural outcome when a person uses time and energy on a project, and A3 supports this by saying: *"It is important that the client participate and gain ownership. Perhaps ownership is the most important factor"* (A3, 31). The client can obtain

ownership when given a clear mandate and by being including from the very beginning (B3). Yet, it is important to emphasize that both the consultants and client need ownership to succeed (B3), and that one need to find a balance of how much involvement is needed to progress in the desired pace (A3, B3) as it can become an issue: *“If you give the client as frequent follow-up as they wish nothing else happens between the meetings because you use up all your time on clarifications and completing the small changes according to what was agreed to”* (B3, 169).

5.2.5 Lack of Process Understanding

As stated previously the majority of Company A and Company B’ customer base is rather inexperienced with the way KIBS are working. As a result of this, consultants from the two units (A1, A2, A3, A4, B2, B3) express that a common challenge that occur is a lacking understanding towards the process KIBS are running. B2 state that clients essentially purchase a new way of working, but that this also represent change, which most people are reluctant to. Thus, A4 explain: *“Half of our job as consultants is to guide the whole team through this way of working, which is different from what they are used to”* (A4, 26). Several consultants (A3, A4, B2) point out that the participants get insecure since it is a new way of working which is often more rapid than what they are used to, and people react to this differently, e.g. by becoming apathetic or very critical. B1 also indicate that this is challenging as people are most comfortable with what they usually do. In addition, A2, A3, and A4 add that the process can be experienced as insecure because it is hard to define and measure, i.e. confirming that the service is rather complex (Aarikka-Stenroos & Jaakkola, 2012; Bettencourt et al., 2002; Løwendahl, 2005). A4 also points out that when designing and producing solutions for new business areas neither the consultant nor the client knows exactly where they are heading, and the only reason consultants may feel comfortable is the fact that they have been through similar processes before. Both clients (C1, C2) sign that they in the beginning felt insecure and stressed about the process they were in, and C2 say that she thought: *“Help! What am I doing here?”* (C2, 132). However, C1 and C2 express that the confusion loosened with time, and that they currently are comfortable with and have a deep understanding for the process. In relation to this, A4 emphasize that the client often feels ‘lost in the woods’, which is a saying he continuously repeat throughout the projects. He illustrates by drawing a curlicue: *“It is like a curlicue in the beginning but in the end, it becomes a flat line... which is a nice illustration of how one actually will experience it. In the middle*

of the curlicue one will be frustrated because there is a lot of unknown factors. Therefore, it becomes hard to see the light when one appears to be stuck in a dark forest” (A4, 36).

Further, A3, A4, and B1 adds that working with consultants demands participants from the client to change their mindsets, which can be challenging as one is used to think differently. C2 confirms this by stating that their old system works perfectly, and then add: *“This project’s mandate is to replace the functionality of the old system...We are describing what already exists in the old, while at the same time thinking a bit outside the box” (C2, 180).* Closely connected to this is a varying understanding between the actors of which activities that are necessary to perform. According to A2, A3, B2, and B3 it is a challenge to anchor an understanding of which activities are appropriate to perform and the value of them. However, *“If the customer does not want to do it, it does not help that I still perceive it to be right” (A2, 158).*

Another common issue is clients who adopt an inside-out perspective, which implies that the customer struggle to lift their head and see the organization objectively, mostly focusing on their own perception (A4). B2 and B4 supports by emphasizing that the client tends to have their own meanings of what is important and ‘right’ to do, which is not necessarily grounded in the end-users’ actual need. As a result of this inside-out perspective, consultants meet clients which states specifically what they want without arguing why (A1, A4, B2). This preset mind is something the consultants (A1, A4, B2) are rather skeptical towards, and A4 exemplifies with a CTO in a bank who without end-user insights stated that they needed to develop a specific system. In order to facilitate the creative process and avoid that the CTO got excessive control, the consultant said: *“Okay, I can hear what you are saying, and it is a great idea. We however need to start in the right end by figuring out what the end-customer really wants and what value we can create for them. Maybe it turns out that there is a match between your system and the end-customers’ needs, but we have to go through the process first” (A4, 26).* In connection to this, A4 emphasize that it can be beneficiary to disconnect top management from the project teams, and rather use them as a steering mechanism at a regular basis in order to avoid ‘CEO-darling’ situations.

Some consultants (A3, A4, B2, B3) also point out that clients often expect the whole solution to be developed simultaneously, which contradicts the ways KIBS are working through smaller deliveries to reduce risk. Thus, consultants need to convince the client that it is beneficial to deliver in smaller

portions (A1, B3). A4 tells that he often describes this logic to the client as a ‘Cupcake’; where one cupcake represents an element of the solution that needs to be created before one can develop the next. In effect, one can build a ‘Cupcake Tower’ in the end. He states that this force the team to prioritize and be realistic, as well as it provides the team with the possibility to learn continuously. B2 supports this logic and specify that it is decisive to reduce the focus and validate rapidly: *“If the client have 15 problems to solve, and we have one good solution to a single problem, then they understand what it takes to solve all the problems”* (B2, 81). It can also be beneficial to continuously mention the complexity of the solution and bring forward insights to keep a holistic focus (B3). Further, A1, A4 and B3 point out that the client often gets into a ‘production mode’ when they get consultants on the project, and that time to market often gets more important than launching something valuable. A1 points out that this can be due to the ‘older consultancy mindset’, and state that following this is unfortunate as one loses the momentum where one continuously can improve, which A4 supports.

At last, Bettencourt et al. (2002) identified low tolerance and flexibility to be a common inhibitor VCC. However, the data collected shows that several consultants (A4, B2, B3) perceive the clients as both flexible and tolerant. B2 claim that how flexible the client is depending on the involvement and openness that the consultants initiate from the beginning. He states that human makes mistakes, thus that consultants also make mistakes, and that the worst one can do is to not admit these misconceptions. This is agreed upon by one of Company A’ clients (C2) which articulate a rather flexible and tolerant attitude towards the consultants. According to B3 clients normally show high tolerance when things do not go as planned, as these changes often are postulated in client needs and end-user feedback that need to be improved in order to deliver a satisfactory solution.

5.2.6 Absence of Common Ground

Consultants from both Company A and B (A4, B2, B3, B4) regards lack of a common understanding, in addition to the goals and vision aimed for as a challenge. B2 describe the inhibitor: *“One of the greatest challenges in digitization projects and processes is the inadequate focus on what kind of goals that is aimed for, or what the client should gain from their investment”* (B2, 113). B3 illustrate the challenge with an example from a current project where the consultancy was unable to convince the client to see the value and importance of setting goals: *“I had no clue what the goals were when*

I entered the project, other than this huge ambitious goal...We needed to understand what intermediate outcome objectives we could help them achieve to be able to reach their long-term objectives” (B3, 59). However, the client expressed an understanding of setting concrete goals, but concluded that prioritizing intermediate outcomes was too time-consuming. Hence, B3 experienced it as going through the process blindfolded as it was challenging to make good decisions, which in effect slowed down the process. B2 and B4 also indicates this by telling that it is challenging to manage the team without concrete goals.

Another challenge that appear through the data is lack of common understanding. A4 point out that the reality perception differs greatly internally at every client; the corporate management have a strategic vision for the future and a personal agenda, while the operational level, which includes lower-level management, has a completely different reality perception. The decision-makers is also liable to mainly focus on profit and not the end-users, creating a difference in views (A1, A4, B4). Thus, B3 describe: *“In my opinion the key for a successful collaboration is to embed a common understanding among the parties. If not, both parties will sit at their own side of the table with completely different thoughts of what we are doing and why we should do it”* (B3, 87). Hence, pointing out the importance of setting both specific goals and visions for the future together with the client early in the process, to create a common ground (A2, B3, B4).

5.2.7 Resistance

The majority of the consultants (A1, A2, A4, B1, B3, B4), express that they regularly experience resistance towards consultants from the client’s employees. A1 tell that some find them troublesome, and B3 state: *“Having consultants walking around in their domain on a daily basis triggers defense mechanism among several of them”* (B3, 81). A1 explain that whether this defense mechanism occur often depends on which type of project the consultant work at. She mainly divides between two type of projects (1) Growth; and (2) Efficiency: *“If it is a growth project one often looks into something new, either a business area or a new segment. On the other hand, if it the project is centered around efficiency, then it becomes ‘help!’... ‘who is getting fired now?’ ”* (A1, 167-169). B4 agrees, and state that it is easier to get the client involved with growth projects because it affects the individual’s working life more directly. In relation to this, B3 point out that as a client himself he experienced consultants which came and alternated the department. He believes that this is a common

misconception about consultancies because one is not there to make organizational changes, but in most cases to create new things. A1 emphasize: *"We are not here to create drama but rather to make great solutions the market appreciates"* (A1, 251). Moreover, A1 and A4 states that consultants can be perceived as greedy people who do not deliver with adequate quality or want the client well, but C1 contradicts this by stating that she is positively surprised by how motivated and eager the consultants were to create a good solution. A2 express that the resistance is not necessarily specifically related towards the consultants, but rather the fact that they bring the knowledge with them to other clients: *"One aspect is that we cost three times as much as the internal employees, hour by hour. Another aspect is that we build up our own knowledge base and then leave to the next customers. So, I experience a skepticism towards that; 'Why build up the expertise of the consultants and not our own employees?'"* (A2, 134). This skepticism is often higher in large organizations where one has departments with the consultants' area of expertise.

Another aspect that appeared is power-dynamics and control issues. Consultants from both companies (A2, A3, A4, B3) describe situations where the client seem to get in control of what the consultants know about the organization and which tasks they include them in. A specific example was provided by B3 which works with an inexperienced client to broaden their offering through digitalization of the portfolio. He describes a situation where the client respects the consultants' competence, but where one still experiences a resistance towards involving 'outsiders' in important tasks. This raise a paradox as the consultants are hired as experts, but the client show reluctance towards their advices and involvement, i.e. not perceiving them as a part of the organization and clearly stating what the consultant can take part in and not: *"They cultivate that they are in control over everyone, every process, and every decision, and perceive the consultants to be there for very delimited tasks"* (B3, 73). One of his colleagues was also thrown out of a meeting with his team in regard to the collaboration, where a participant from the client stated: *"There cannot be consultants in this meeting, so...so I prefer if you just leave"* (B3, 81). However, B3 emphasize that this was a special event, and that the resistance does not account for all employees as there are individual differences within the organization. A2, A3, and A4 joins this discussion by telling that the client often involves several consultancies on bigger projects to maintain control, and sometimes move the actors away from each other physically if they experience limited influence. This makes it difficult for KIBS to deliver a comprehensive and holistic service (A4). Closely connected to this issue is the fact that the consultant has limited decision-making power, which is both normal and realistic in the collaboration (B3). At

last, it is important to emphasize that resistance towards consultants does not imply insufficient advocacy, which is identified as a barrier by Bettencourt et al. (2002) and cannot be confirmed by this research.

5.2.8 Supplier Arrogance

The interviewed consultants have contrasting opinions in regard to supplier arrogance. Some of the consultants (A1, A4, B4) confirms Aarikka-Stenroos and Jaakkola (2012) findings by acknowledging that arrogant suppliers/super-professionals exist. However, it is unlikely that consultants are perceived as arrogant within the team, as one collaborates closely to support the task at hand and therefore gain a personal relationship (A4, B4). However, A4 and B4 acknowledge that actors who have less contact with consultants might find them more arrogant. On the other hand, several consultants (A3, B1, B2, B3) express that they neither have experienced being perceived arrogantly nor experiences other consultants in this way. A2 joins the discussion by stating that super-professionals is a prejudice against the consulting industry, and mainly the opinion of people that do not have any experience in working with consultants. She tells that the industry often is perceived to consist of career conscious, ambitious, and skillful individuals which will do anything to be successful, which often can be perceived as arrogant. However, she does not experience consultants in this way, but acknowledge that there might be differences between different types of consultant and admits that some of her colleagues in the mother organization can be perceived as slightly arrogant. A1 agrees and point out that she perceives a shift in the industry where technology projects which promote interdisciplinary works is less arrogant as the teams consist of people with different expertise and personalities, which creates a different culture. It thereby distinguishes from management consulting as one involves the whole organization in the task, and A2 say: *“We are not a bunch of consultants that arrives with our suits on, talking over their head”* (A2, 132). Super professionals may therefore come from a different part of the consulting industry that mainly works with strategy projects.

The clients that participated in the research also have diverse opinions regarding supplier arrogance. C1 confirm that she has met consultants with a ‘know-it-all’-attitude, who turn down the thoughts of the client and pose a negative attitude towards the firm’s previous decision-making by saying: *“That’s just stupid, why did you do it like that?”* (C1, 159), which consequently inhibits the process. She

emphasizes that the client's experience and thoughts should be respected as it is important to incorporate the experience into the new solution, and say: *"We need help to innovate, but that does not imply that the consultant knows better than us"* (C1, 165). Thus, C1 indicate that arrogant attitudes can create a distinction between the parties, which also is pointed out by A3 and A4. In contrast, C2 indicate that she never has experienced arrogant consultants.

Another aspect that becomes evident in the discussion is presented by A4: *"I believe all consultants have a risk of being perceived as arrogant. Mainly since we deliver something they have been unable to deliver themselves. In effect the nature of the service may tend to create this impression"* (A4, 114). Together with A3, he further explains that the consultants have a specialist competence which the customer do not possess, giving the impression of a 'know-it-all'-attitude. Thus, he perceives that a common thought among the clients is: *"What do they know about how we really do it here? We have been working here the last 20 years, we know"* (A4, 116). Yet, A2 rather assures that the consultants are under authority of the customer, which she describes as a 'caste system' where the client rules. Moreover, B4 mentions that arrogance depends on the culture of the consultancy, and that this affects how their employees are perceived by the client, as some consulting firms aims for a more professional appearance. He further states that one should listen, and not have so many opinions in the beginning of the collaboration, before one front competence and expertise. This way, the consultant seems humble and respectful towards the client, which B1 supports. However, if the client is experienced with the use of KIBS or they are buying pure expertise and knowledge, one should front the competence somewhat earlier as they have higher requirements (B4). A4 explain that: *"It is easy to just act stupid...and state that the client is an expert, and that we are here to learn"* (A4, 120). B2 adds that one can be genuine and truthful to avoid being seen as arrogant, and B1 say: *"Keep your feet on the ground and say it like it is... and be completely honest when needed"* (B1, 143).

5.3 Identified Overarching Strategies

Literature suggests three strategies as performance enhancing in relation to challenges in VCC in KIBS-client engagements; 1) Project management and planning; 2) Client training and education; and 3) Client socialization and team building activities. This research has identified these three, in addition to; 4) Create a common ground and 5) Clear and honest communication. The responses are overarching and facilitate the VCC process both as tools for managing challenges and to facilitate successful collaboration (Figure 13).

Figure 13: Identified Supplier Strategies in KIBS Engagements



Note. Created by the authors (2019).

5.3.1 Project Management and Planning

In line with Bettencourt et al. (2002) and Santos and Spring (2015), this research have identified and confirmed **project management and planning** as an essential strategy to ensure successful collaboration: *“The chance that something goes wrong is unlikely if you make good preparations, align the team to clarify roles and tasks, communicate enough with the customer, and agree on the prerequisites and vision”* (B4, 30). Overall the consultants bring up some key aspects the strategy consists of; (1) Contractual agreements; (2) ICT; (3) Co-location; and (4) Meetings.

The majority of the consultants (A1, A2, B1, B2, B4) tell that **(1) contractual agreements** are an essential part of project management. Contracts are used to regulate the collaboration, through a description of the scope, budget, schedule, and mandate (A1, B1, B2, B4). The mandate includes prerequisites for the collaboration, for instance one plan the customers involvement beforehand, their availability, and the degree of open sharing (A1, A2, A4, B1), as well as the responsibilities of the involved parties (A1, B1). One should also formulate the scope into simple statements which several key stakeholders at the client physically can sign (B4), and A4 and B3 find it beneficial that the scope is formulated broadly. Even though this guides the process, A4 claim that projects seldom follow a

fixed path as the project and its environment is in constant change. Thus, A1 point out the importance of developing contracts with realism as it is vital to respect the individuals involved, and their capacity and time, exclaiming that one should not: *“Push people into a hamster wheel”* (A1, 256). The projects in Company A and Company B are usually managed by two project leads, one from each side (A3, A4, B1, C1). Company B have a project management framework which includes principles on how the project should be managed and governed, however B4 tell that there exist individual differences in how project leads choose to use it: *“Every project lead has his or her own form and color”* (B4, 136). In Company A, one usually divides the tasks between the parties, but assign responsibility to one from each side, in order to ensure that the participants feel a collective responsibility towards the goals (A4). At last, it is important to mention that changes in conditions also should result in revising the formal frames (A2, B2).

Another component of this strategy that is emphasized by A4 and B1 is the use of **(2) ICT**. They claim that ICT plays an important role in facilitating communication in the team, independently of where one is located. However, it is exemplified as particularly vital to have a proper system of interaction when working at different locations, as it easily can appear chaotic when one do not collaborate in the same cloud but send files back and forth. A4 argues that this constrains the VCC process, because it delays the feedback loops and as one easily can get deprioritized by a participant with many responsibilities. For instance, emails are less efficient as one can experience that: *“We mailed it to the client, and it ended up in a queue along with all the other emails he received that day, making the process way less efficient.”* (A4, 60). Consequently, A4 and B1 agrees that email is not always the way to go and rather emphasize the use of more dynamic and rapid systems of interaction. Both consultants present Trello as an important project management tool which allows to keep track of tasks in three categories; (1) To do; (2) In progress; and (3) Completed. Additionally. It can relieve pressure from the project lead as one can comment on the task’s progress, reduce the needs for updates, and enhance the understanding of the whole team’s progress through visualizations (A4). A4 also tell that it is a proper tool to motivate, keep the customer accountable, and document the process, and says: *“It is absolutely brilliant...Trello was vital for us, as it allowed us to clarify the responsibilities and deadlines since many of the project members did not work full time”* (A4, 54). Other mentioned collaboration tools are Mentimeter with interactive presentations, workshops, and meetings (B1), and chat and communication tools like Slack (B1, A4) and Mattermost (C2). However, A4 claim that such tools cannot always be used due to the client’s corporate security regulations.

Further, the majority of the consultants (A2, A3, A4, B1, B2, B3, B4) identify **(3) co-location** at client location as critical to achieve a successful collaboration: *“It is really important to sit and work, eat lunch, and take coffee breaks together to create a good working environment”* (A3, 63). The clients agree with this (C1, C2), and it is expressed that colocation enhances collaboration (A4), builds trust (B4), and team spirit (A2, B2). It also enables quick, frequent, and informal clarifications (A3, B1, B4, C2), and creates a safe environment (A2) where the client can experience a steep learning curve (B1). A2 illustrates it like this: *“Every day we discuss and create things together side by side”* (A2, 182). In this regard A2 state that it is important to be aware of the specific seating in the project zones, and that it should base on personalities, competence, and tasks, in order to facilitate better communication and knowledge sharing, which B3 agrees to. Having that said, it is of utmost importance to be co-located in the beginning, but that one can reduce to a part-time colocation and substitute with ICT after a while (A4, B4). However, B4 emphasize that trust needs to be built before one go remote, and B2 claims that socialization activities are crucial in the established project zones.

Moreover, **(4) regular and fixed meetings** are important as one get updated on the progress, make decisions, do clarifications, and solve uncertainties instantly (A1, A3, A4, B1, B3, B4). However, A3 and B3 tell that it must be a balance between the number of meetings and time to work, to avoid inefficiency. As stated before the majority of the consultants tell that the project is assessed through agile methodology with sprints or iterations. These includes sprint planning (A3), daily scrum with stand-up (A1, A3, A4, B1, B3), status meetings (A1, A3, A4, B3), demo (A3), and retrospective (B1, B2, A3). These meetings overall aim for reflections, clarifications, and alignment, as one through a stand-up for example can make other team members aware of what you did yesterday, what you are going to do today, and what impediments that may block your progress (A4). A1 further tell that status meetings are used to discuss the teams progress, while B1 say that evaluations often include an assessment of the sprint’s success, challenges, and potential improvements for the next iteration. In this regard, B2 emphasize the importance of creating a team culture where evaluations are made positive, by focusing on what one could do better and how. The results of these evaluations should be shared to the rest of the consultancy to increase the overall knowledge of the firm, and B2 state that they can improve in this regard. B4 and A4 also confirm the use of steering committee which consist of experts and other important stakeholders that guide the project. If the client does not have capacity or willingness to prioritize these meetings, B3 explain that one need to establish one of the

two alternatives; 1) have access to key personnel at the client when needed; or 2) a fixed time for clarifications, to increase the effectiveness of the process.

However, several consultants (A3, A4, B4) mention that there is a difference in project management depending on the length of the project. In projects with a limited time frame project management get more rigid and often involve regular and fixed meetings, as well as formal project governance to keep track of the progress (A3, A4, B4). Longer projects can be described as ‘looser’, and one do not need to continuously involve the client and document everything (A3, B4). A4 also describe that the challenges that arise in longer projects fades out since the team has the time to sit down and fix the root cause of the problems, in contrast to shorter projects where one often ignores small challenges that arises due to the minimal time left of the collaboration.

5.3.2 Client Training and Education

In accordance with Bettencourt et al. (2002), Eisingerich and Bell (2006; 2008), Kukk and Leppiman (2016), and Santos and Spring (2015), this research have identified **client training and education** as a supplier strategy in the VCC process. The goal is to make the client comfortable and competent enough to take charge of the solution and thereby represent it when the consultants leave the project (A1, A4, B1). Therefore, A2 and B3 argue that an underlying objective of the collaboration is to help the client to grow their knowledge bases and experience. B1 explains that the collaboration often starts with knowledge transfer which means that the consultants presents their domain by giving insights into trends, the desired technology, development, the relevance for the firm, and what it demands from them. He also expresses that Company B often set up a training program either online and offline to train the client’s participants. Respondents from Company A supports this (A2, A3, A4), and state that another common activity is to explain user scenarios in order to provide the participants with insights on the purpose of the solution. A3 emphasize that one also arranges a series of information and training workshops as this is a more dynamic place to learn and explore. Both C1 and C2 tell that they have participated in these workshops and that it increased their understanding. In relation to this, A2 and A3 add that it is essential to explain why various activities are performed, which is supported by C1. Additionally, A3 emphasize that it is important that the training continues throughout the project to increase the teams understanding and tell that they have lunch meetings once in a while where one share knowledge about a specific topic.

Several consultants (A2, A3, A4, B1) express that these activities are performed in order to bridge the gap between the consultant's and client's knowledge bases. Thereby the customers expertise increase, and B1 tell that they need to facilitate so that the client gets to a level where they can participate with confidence and share their knowledge. He states: *"The client needs practical experience in a safe environment. We join them while they experiment and learn new things"* (B1, 133). A2 joins this discussion by emphasizing the importance of learning-by-doing: *"If the client and I go into the street to do a guerilla test, the goal is that the client's participant, e.g. a product owner, is able to do it by herself the next time"* (A2, 24). C2 tell that she has thrown herself into such activities, where she through learning-by-doing have experienced a steep learning curve. Thereupon, B1 point out that KIBS engagement is an investment in new knowledge where one seeks to advance the client's skills to make them able to continue on their own. He says that this is particularly important in cases where the projects involve dynamic solutions, such as chatbots, because the solution needs to be managed, improved, and taken care of also after the consultants have left, and that someone needs to possess this competence.

Moreover, A1 claim that this strategy involves trying to inspire the client's participant to be curious and motivate them to do things differently. This is supported by A3 and B4, where the latter emphasize that it is important to motivate the participants through recognition and positive feedback since it creates a feeling of safety. He also believes that building the participants self-confidence through learning makes them better employees both during the process and after the project end. In relation to this, one of the clients (C1) tell that she has received support and motivation from the consultants which have created great learning experiences where she has developed both personally and professionally. She also emphasizes that the client should be involved throughout the whole project. However, A3 and B1 acknowledge that consultants can become better at providing the client with the necessary training and education. KIBS' way of working can be demanding and different, and it is consequently essential to increase client's expertise for the success of the collaboration. However, A2 emphasize that involving clients in training and education does not imply that they achieve the expertise and special competence that the consultants possess.

5.3.3 Client Socialization and Team Building Activities

Another strategy identified in literature is **client socialization and team building activities** (Bettencourt et al., 2002; Böstrom, 1995; Büttgen et al., 2012; Santos & Spring, 2015), which this research also finds evidence for. The majority of the consultants in Company A and Company B (A1, A2, A3, A4, B1, B2, B4) emphasize the importance of socialization: *“The social beyond the professional is extremely important”* (A4, 66). A2 adds that team members who feel happy and are challenged at work flourish and perform better. A2 therefore argue that the essence of this strategy is centered around building a culture where the participants experience a team spirit from the beginning. In relation to this, A1 add that she works towards creating a more personal culture within the teams, exemplifying that one should celebrate the birthday of team members. Consultants from Company B does not directly say that socialization is related to culture, but both B1 and B2 express that it is essential to get to know each other both through professional and social activities. B2 argues that this increase the chance of project success, and B3 joins this discussion by stating that he believes that socialization would have had a positive impact on the project he worked at. Both consultants acknowledge that one always can become better at socializing (B2, B3), because: *“One can actually never get enough of it”* (B2, 198).

Company A and Company B use many of the same activities to socialize with the client. Both A1, A2, A4, and B1 point out that each collaboration starts by gathering the involved parties in a kick-off event. A4 tell that the kick-off has both a social and professional component. He provides an example of an ice-breaker called ‘draw yourself like a superhero’. This activity provides an alternative way of getting to know each other as one by drawing can tell a lot about oneself and the role, e.g. the project leader can draw herself as an octopus with 13 arms. As a result of the event, the consultants get an overview of the actors in the room, their strength, expectations, and hopes for the collaboration. He also points out that this can provide the customer with a better understanding of which consultant possess which competence and strength, something that can result in increased role clarity and the client being more comfortable with the consultants. B3 also add that he has joined a kick-off arranged by his client for the whole organization, which he perceived to have a positive impact on the collaboration. This was also confirmed by one of Company A’ clients (C1).

Moreover, the parties initiate various team building activities during and outside working hours. Outside working hours, the participants mainly engage in dinners, quizzes, games, and pub crawls

(A1, A2, A3, A4, B2, C1, C2). A4 provides an example from a bank he previously worked at, where the relationship between the parties evolved through such activities and resulted in a different tone in the project as the participants through e.g. watching the northern lights got a more personal relationship. In connection to this A1 point out the importance of not only having: *“Pub crawls where the boss starts to strip, but actually nice events such as birthdays to show that one care about each other”* (A1, 288). A3 and C2 also mention that they have organizational development gatherings a couple of times a year where they take a day off the project to focus on team building. She tells that it is very expensive, but effective way of increasing the team spirit. C2 attended this gathering and point out that it actually made her talk to her colleagues about other subjects than the professional domain. Besides these activities A2, B2, C1, and C2 emphasize the importance of small acts, such as eating lunch together, having cake every Thursday, and bringing chocolate to the meeting room. B2 tell that he experiences these regular small acts to be crucial and more efficient, than arranging big and expensive events occasionally. However, several consultants from Company A (A2, A3, A4) point out that these small activities demand co-location, telling that socialization is important but also more challenging when one work distributed.

Further, A1 and A4 point out that it is essential to be human, honest, and genuinely interested in the people you work with. A4 tell that one sees clear differences between projects where members dare to stand out and share from their personal life versus projects where one become very professional. This have a positive impact on his team’s culture and A4 provides an example where he had a bold project leader: *“She dared to tell us when she was not doing so well, asked about how our kids were doing, and she remembered everything we had talked about before”* (A4, 44). B4 joins this discussion by telling that it is important to show your personality; be a bit ‘loose, free, and unserious’: *“It is okay to come to work in a yellow shirt if you want to”* (B4, 138).

5.3.4 Create a Common Ground

Even though it might seem obvious that common goals, vision, and an aligned understanding is important to work efficiently, B3 state that it often becomes a challenge at the project’s outset, and this research have thereby identified **create a common ground** as a supplier strategy during VCC. To be able to set a path forward for the involved stakeholders, A1 argue that one need a common understanding of the reality and its connected task. To facilitate this one can, begin with the question

‘How Might We...?’, which is the first part of the exercise ‘Challenge Statement’: *“A common issue in the collaboration is that we are unable to create conception of what we are trying to achieve. Then the ‘Challenge Statement’ is a good starting point because one aligns everyone in the room by saying ‘Okay, we agree that this is what we should solve and what we pay for’”* (A4, 18). The ‘Challenge Statement’ can go through several iterations and be conducted with multiple stakeholders, before one decide on a path ahead together with the team, and the connected activities one need to conduct to get there. The exercise forces the participants to concretize their thoughts and ideas on paper, and it allows the consultants to get an overview of the individual’s expectations.

Absence of goals makes it challenging to make good choices (B2, B3), and A2 describe the importance of them by emphasizing that each project should have some ‘guiding stars’ that effectively can provide them with guidance when making decisions: *“Should we develop A or B? We don't have budget for both... Is it A or B that takes us closest to our vision? Is it A or B that is most in line with our guiding stars?”* (A2, 116). This is supported by B2 and B3, and B3 provides an example from earlier in his career where he as a client used ‘guiding stars’ to push forward the decisions and tasks that brought them closest to the goal: *“If you have two tasks and one of them leads you directly to the goal that everyone has agreed on and the other task does not, then it is like ‘Okay, then we know what to do’”* (B3, 95). Further, these ‘guiding stars’ must be realistic, and one need to have envisioned which actions are needed to reach them (B3). A2 and B3 also emphasize that by establishing common goals together, the client will feel more in control and get an increased feeling of ownership. C1 also point out that it has made it easier for her to come up with suggestions and changes.

In relation to the creation of a common ground, almost all consultants from Company A (A2, A3, A4) describe the use of visual elements during the process. A2 tell that they have created a customer journey that describes what they will create and how the end-user should experience the solution. This is supported by A3 who during the interview show the interviewees a 14 meters long poster of a customer journey created by the team: *“It communicates to the whole team, and increase the knowledge of everyone”* (A3, 97). C2 tell that the respective poster has especially helped the developers to understand what the organization need the system to. In addition, simple and short messages on posters can be hung on the wall by the coffee machine or on the work desks, and can include information on insights, vision and goals, and small reminders to the team members (A2). A3 adds that her project leads have developed core values for the collaboration which are posted on the

walls in the meeting rooms. She further expresses that there can be a difference in understanding between the core team and the rest of the organization and tell that many stakeholders in her current project lacked an understanding of what they were aiming for. As a result, her colleague created a movie that explained the system, as they believe that multimedia has a higher impact as a communication medium than flyers, posters, or articles on the intranet. Moreover, A4 add that one easily can visualize and facilitate a common understanding by establishing a ‘war-room’; a room which is filled with posters, drawings, and notes along the walls with information on the project, and it’s connected process and progress. This way, all interested stakeholders can enter the room to give input and validation: *“When everything is on paper it gives the psychological idea that the project is in the making. This is very important in this type of process as nobody really knows what direction the project will take”* (A4, 36).

5.3.5 Clear and Honest Communication

The last strategy that is identified as fundamental for the VCC process is **clear and honest communication**. This strategy is closely related to the importance of frequent interactions (e.g. Aarikka-Stenroos & Jaakkola, 2012), and all the consultants from both Company A and Company B specify the importance of an ongoing dialogue where one communicate and discuss on a daily basis. A3, B2, and B4 argues that ongoing dialogue facilitate a better collaboration, but A3 also specify that it is of particular importance in the beginning.

Moreover, the majority of the consultants (A1, A2, A3, A4, B1, B2) emphasize the importance of being open with both oneself and the client in order to avoid problems and increase the chance of success. A4 express that he perceives a shift within the consultancy industry, as one today not always need to have the ‘right’ answer, but rather can be honest and solve the task through co-creation with the client. B1 and B2 also point out that honesty is the best policy. Consequently, B2 tell that he seeks to facilitate an open dialogue between the parties as this can have an impact on the efficiency and success of the collaboration. A3 agrees to this and tell that it is important to be transparent in the way one work through e.g. sharing the progress openly. Additionally, A1 emphasize the importance of having a reciprocal relationship with the customer: *“One need to create a relationship where both parties dare to bring up difficult discussions... and where one through honest communication and dialogue can prove that one actually is there to create something valuable together, and not only to*

sell projects and people” (A1, 212-216). A2 agrees to this and specifies that a good client product owner can be described as a person who is brave enough to be clear and fearless when communicating with the consultants. Moreover, B2 adds that this implies that one needs to be brutally honest by directly telling the client when one perceives investments to be unwise, which might not be what all consultants do. However, it also becomes evident from the data that although consultants prefer to be honest, they are aware that it can be challenging, especially when issues arise within the team (A1). Consequently, A1 comes with a recommendation to other consultants: ‘two stars and one heart’. This technique implies that one first provides the person one is talking to with two stars, i.e. two things they have done well, and then one asks for the heart or a wish: *“If you could check if Pål and Jan could prioritize this, it would have had a huge impact on our work progress further and the outcomes of the project”* (A1, 244). In this way the challenge appears less problematic and one confronts the person in a nice and motivating manner.

Another aspect several consultants (A1, B1, B2, B4) emphasize is asking questions. B1 points out that it is important as it is impossible to understand the different shades of the field and organization without first-hand knowledge. In relation to this he also emphasizes the importance of follow-up questions, specifically in order to make oneself and the client understand the scope of the task. A1 and B2 support this, specifying that it is important to ask both open-ended and critical questions from the beginning in order to get an understanding of the task. A1 argues that displaying this behavior mainly signals curiosity and gives the customer insights into how KIBS are working. These two aspects are confirmed by C2 who tells that the consultants often are curious and ask a lot of questions. Additionally, B4 mentions several times during his interview that it is central to listen to the client when they answer these questions, instead of mainly showcasing own competence. Further, two of the respondents (A3, C2) specify the importance of using the client’s conceptual frameworks and words, as each firm can have their own ‘tribal’ language. A3 adds that in order to create an understanding of the task at hand and what one really is talking about they translated their own design and technically-oriented concepts into the client’s context. This is supported by the client (C2), who emphasizes that it particularly was an issue in the beginning of the project and states: *“Some things you just do not understand when they explain it, because they speak a completely different language”* (C2, 65).

5.4 Summary of the Findings

Table 8 provides an overview of the identified inhibitors and strategies in Company A and Company B, and it becomes evident that the two firms face similar challenges and approach them in somewhat equivalent ways. It also becomes evident that the companies operate in a comparable manner, as the two case companies provide their private and public clients with new digital possibilities by combining interdisciplinary knowledge within the fields of technology, digitalization, strategy, innovation, and design. Although there exist differences between the firms, these appears to be minimal. The upcoming discussion is therefore not centered around each firm, but rather as an intertwined discussion. One assumes that the low difference in findings might be due to two quite typical cases within digital development. At last, it is important to mention that the inhibiting elements not necessarily implies conflicts within a team, but rather smaller challenges that often appear as natural. An extended table that includes theoretical background can be found in Appendix 9.

Table 8. Summary of the Findings

Observation	Company A	Company B	Client
Inhibitor			
Resources, Capacity & Time Constraints	A1, A2, A3, A4	B1, B2, B3, B4	
1. Capacity	A1, A2, A4	B1, B3, B4	C2
2. Competence	A1	A1	
3. Lack of role clarity	A2	B1, B3, B4	
4. Distance	A4	B1, B4	
Information & Knowledge Asymmetry	A1, A3, A4	B1, B2, B3	C1, C2
1. Inability to articulate needs and wants	A1, A4	B2	
2. Inability to make decisions	A3	B2	C2
3. Reluctance to share political and sensitive organizational information	A4	B3	
Unrealistic Expectations	A1, A3, A4	B2, B3	
1. Depends on degree of experience with consultants	A1, A2, A4	B2, B4	
Lack of Customer Participation & Involvement	A1, A2, A3	B1	
1. Lack of ownership	A2, A4	B1, B2	
Lack of Process Understanding	A1, A2, A3, A4	B2, B3	
1. New way of working => Insecurity	A2, A3, A4	B2	C1, C2
2. Change mindset	A3, A4	B1	C2
3. Clients possess an Inside-Out perspective	A1, A4	B2	
4. Expect simultaneous development	A1, A3, A4	B2, B3	
5. Production mode	A1, A4	B3	
Absence of Common Ground	A1, A2, A4	B2, B3, B4	
1. Absence of common goals and vision	A4	B2, B3, B4	
2. Absence of a common understanding	A1, A2, A4	B3, B4	
Resistance	A1, A2, A4	B1, B3, B4	
1. Control Issues	A2, A3, A4	B3	
Supplier Arrogance	A1, A2, A4	B4	

Observation	Company A	Company B	Client
Strategy			
Project Management and Planning	A1, A2, A3, A4	B1, B2, B3, B4	
1. Contractual Agreements	A1, A2	B1, B2, B4	
2. ICT	A4	B1	C2
3. Collocation	A2, A3, A4	B1, B2, B3, B4	C1, C2
4. Meetings	A1, A3, A4	B1, B3, B4	
Client Training & Education	A1, A2, A3, A4	B1, B4	C1, C2
1. Knowledge transfer	A1, A2, A3, A4	B1	C1, C2
2. Inspiration & Motivation	A1, A3	B4	
Client Socialization & Team Building Activities	A1, A2, A3, A4	B1, B2, B4	
1. Kick-off	A1, A2, A4	B1	C1
2. Activities outside working hours	A1, A2, A3, A4	B2	C1, C2
3. Small acts of love at work	A2	B2	C1, C2
4. Be personal	A1, A4	B4	
Create a Common Ground	A1, A2, A3, A4	B3	
1. Guiding Stars	A2	B2, B3	
2. Visual Elements	A2, A3, A4		
Clear & Honest Communication	A1, A2, A3, A4	B1, B2, B3, B4	
1. Be open & honest	A1, A2, A3, A4	B1, B2	
2. Reciprocity	A1, A2		
3. Ask questions	A1	B1, B2, B4	
4. Create a common language	A3		C2

Note. Created by the authors (2019)

6.0 Discussion

The purpose of this study is to advance theory on how inhibitors that strain VCC in KIBS engagements can be managed by the service provider to facilitate successful collaborations. Current literature provides limited understanding of how VCC is executed in practice (Aarikka-Stenroos & Jaakkola, 2012; LaPlaca & Lindgreen, 2016; Marcos-Cuevas et al., 2016), and which aspects that may strain the VCC process in KIBS engagements and how these are managed (e.g. Durugbo & Schwetschke, 2018; Malshe & Friend, 2018). The initial understanding of the topic is illustrated in the first conceptual model (Figure 6). The model shows that VCC occurs in the relationship between KIBS and customer, where the VCC process is connected to the identified strategies and inhibitors through arrows that circulate. This indicate that VCC can be strained at a continuous basis as new challenges can transpire and impact the VCC process, which this research also confirms. However, it poses a rather narrow understanding of the connection between inhibitors and responses, as one initially assumed existed which turned out to be wrong. Consequently, the revised conceptual model (Figure 14) which will be presented at the end of this discussion is quite different, and the following part gives insight into why.

This study extends the existing theoretical understanding in the field (e.g. Aarikka-Stenroos & Jaakkola, 2012; Bettencourt et al., 2002; Kukkk et al., 2014; Lessard & Okakwu, 2016; Santos & Spring, 2015) by providing an initial understanding of how two T-KIBS manage challenges that occur throughout VCC. The study suggests five overarching strategies that can be used to manage the eight identified inhibitors, (Table 8). Yet, it becomes apparent that there is no distinct way to solve inhibitors due to the complex, unique, and context-specific nature of the VCC process. It is thereby naive to aim for complete elimination of the challenges as the parties enters an uncertain process, and the strategies thereby seek to guide the consultants to minimize the issues. The consultants also highlight the importance of handling these challenges at a continuous basis, as each instance of VCC provide the participants with valuable learnings that impacts the next iteration (Vargo & Lusch, 2011). However, the consultants acknowledge that VCC pose special challenges to managers as the shift towards co-creation increase the complexity (Aarikka-Stenroos & Jaakkola, 2012; Breidbach et al., 2013; Kukkk & Leppiman, 2016), and recognize that one can become better at approaching barriers, independently of size and scope. The research thereby provides a more nuanced picture on

VCC by not only posing positive outcomes, but rather emphasizing what one should avoid increasing the chance of success (Lessard & Okakwu, 2016).

VCC Process

This research confirms that VCC is emergent in KIBS engagements (Lessard, 2014b), and contributes to the rather fragmented literature by supporting that it is constituted by the five collaborative activities suggested by Aarikka-Stenroos and Jaakkola (2012). Yet, these activities seem to be less simultaneous than the authors claim (2012), as the data indicate that *diagnosing needs*, *designing and producing the solution*, and *implementing the solution* occur through loops in every iteration. *Organizing resources and process* and *managing value conflicts*, on the other hand, seems to be more continuous throughout the collaboration and influence how the three former activities unfolds. Further, it becomes evident that the process builds on three elements that impacts the success of the collaboration: iterative process, trust, and interdisciplinarity. First, these activities appear to entail a higher degree of iterations than existing studies claim, which can be explained in the user-centric development of technical or digital solutions that T-KIBS deliver. Agile methodologies are also emerging within technology consulting, and one can thereby interpret this as a shift towards co-creation. Moreover, the interviews indicate that trust is a fundamental prerequisite for VCC to unfold, in addition to a potential outcome of the process (Franklin & Marshall, 2018; Følstad, 2017; Scarso & Bolisani, 2011, 2012). It facilitates a dialogue which may prevent challenges to occur and can make the consultants feel motivated and safe. At last, this research support Mustak (2018) by highlighting the importance of interdisciplinarity to ensure broad perspectives in the team's pursuit for success. These three elements can thereby facilitate the VCC process, as well as the collaboration towards a positive end. Hence, this research provides further valuable insights into the VCC process, particularly in T-KIBS, which can make client and KIBS more aware of the process they are involved in.

Inhibitors to VCC

This research has identified four inhibitors that may strain VCC which are consistent with past research, as well as four new challenges in the two cases. Firstly, the consultants agree with existing literature that **information and knowledge asymmetry** is an inherent part of the relationship. However, as they argue that the asymmetry is impossible to avoid, they do not refer to it as a considerable challenge, as previous research suggests (Aarikka-Stenroos & Jaakkola, 2012;

Gummesson, 1978; Kukk et al., 2014; Ojasalo, 2001). Yet, both Company A and Company B acknowledge that the asymmetry is extraordinary in T-KIBS engagements, as the knowledge bases often are highly contrasting (Kristensson et al., 2008; Nambisan & Nambisan, 2008). Consequently, they tell that one is highly dependent on each other to co-create value, which is in line with the findings of Möller and Törrönen (2003) who show that parties get proportionally more dependent on each other when asymmetry increases. One thereby acknowledges that asymmetry can become a hindrance without proper knowledge sharing, and the consultants highlight that experts, previous experience, and examples help them to decrease the asymmetry. In this regard, the data show that the client shares all available information, except political and sensitive information, thus confirming Malshe and Friend (2018) who found some customers to resist complete transparency. This can for instance be explained by the fact that the technical solution can change the organizational structure. Further, Løwendahl (2005) claim that a significant disequilibrium of expertise and experience may hinder a functioning service delivery process. This research rather show that different knowledge bases can enable the process, as interdisciplinary allow the team to create good solutions by combining their different competencies. Moreover, this study indicate that the upcoming inhibitors spin off from the inherent asymmetry and can be perceived as a root cause. Collectively, this aspect injects a novel theoretical perspective into the relationship and nature of the service and emphasize the importance of decreasing the asymmetry for a successful collaboration.

Aarikka-Stenroos and Jaakkola (2012) claim that **unrealistic expectations** are quite common in KIBS engagements, which this research confirms as the consultants perceive the client's expectations to be unrealistic in regard to the chosen level of investment. However, the respondents bring a new perspective by claiming that this is particularly evident among inexperienced customers in relation to digital solutions, and they highlight that this can be due to the asymmetry (Heikka & Nätti, 2018). Further, research by Kukk and Leppiman (2013) revealed that KIBS frequently fails to meet the expectations of their clients. This research nevertheless found that the interviewed clients of Company A are satisfied with the service delivery, and that it rather exceeds their expectations. The data indicate that this can be traced back to the iterative and incremental way of working which enables a predictable and transparent delivery. It also leads to frequent interactions which increase process understanding, and thereby decrease the likelihood of unrealistic expectations.

Further, extant literature recognizes **lack of customer participation and involvement** as a potential issue, which this research recognizes. However, it appears to be less extensive, especially in Company A, because one sets participation as a prerequisite for the partnership. Consequently, the consultants often meet clients which are motivated to participate (Kukk et al., 2014). This contradicts the findings of several researchers (Bendapudi & Leone, 2003; Petri & Jacob, 2016) who found demotivated customers to be an extensive barrier. The data rather indicate that clients enjoy the involvement and find motivation in the steep learning curve of new working methods, which also influences their satisfaction and value perception in a positive manner (Yim et al., 2012; Lapierre, 1997). However, it can become a major challenge if the client lacks the **resources, capacity, and time** to contribute, conforming Vafeas et al. (2016) and Töllner et al. (2011). This challenge is apparent in the VCC process of both Company A and Company B, and one of the consultants claim that it has occurred in all his projects so far. Lack of resources mainly impacts the parties' ability to co-create and the project's ViU, and it can be explained in the fact that the client still possesses an 'order and delivery'-mindset. They thereby do not understand the resources demanded for co-creating value propositions. Further, it is also evident that T-KIBS engagements demands much from the client as one due to the asymmetry is highly dependent on each other's resources (Möller & Törrönen, 2003). Yet, the extent of this issue is surprising, as previous research indicate that clients in the technology industry easily provide the necessary resources (Aarikka-Stenroos & Jaakkola, 2012). One argues that this can be explained by clients often being inexperienced, which causes a lacking understanding of the purchased solution and its scope. Consequently, it is important to have a dialogue around roles, connected responsibilities, and the scope of the task to be solved (Bettencourt et al., 2002; Böstrom, 1995).

Existing research on VCC in KIBS engagements do not address whether the clients understand the VCC process they are involved in. Thus, this study revealed **lack of process understanding** as an inhibitor, possibly originating from the methodology of KIBS' work and the inexperience of their customers. As the clients essentially purchase a new working methodology the consultants perceive that participants experience the process as chaotic and complex. The majority of clients possess an inside-out perspective, and often expect an instant solution development where everything happens at once, which contradicts the agile way the companies are working. Consequently, one recommends the firms to reaffirm agile as a part of the project's mandate. Further, one assumes that process understanding increase over time and experience, and consequently that the beneficiary will get more

comfortable with iterations, short feedback loops, and the dynamic cycle featured by continuous learning in long-term relationships, which became particularly evident in Company A who had longer projects. However, consultants in Company A claims it to be a bigger challenge than actors in Company B regarding the outset of the project. A potential explanation of this can be that Company A is involved in many growth projects with a focus on innovation, which can hold a higher degree of uncertainty. Company A also emphasize participation as a prerequisite to co-creation, while Company B seems less used to involving participants at 100%.

Moreover, one suggests an expansion of the theoretical notion by introducing **absence of a common ground** as a challenge, particularly evident in new relationships. In this regard Company B particularly emphasize the challenge of agreeing on goals and vision, as they experience that the client often finds it difficult to understand what they actually can achieve. Company A, on the other hand, find it more challenging to align all the participants towards a common ground. These differences can potentially be explained in the projects the firm employ; Company B deliver more specific solutions that require goals than one can work towards, whereas Company A often work with unknown entities and thereby need to agree on a common direction. One therefore tentatively propose lack of process understanding and absence of a common ground as new inhibitors, with the caveat that it requires further empirical exploration.

Additionally, one advances the current theoretical understanding by identifying client **resistance** as a potential impediment. Consultants from both firms have experienced situations where individuals within the organizations show defense mechanisms by controlling and restraining their involvement. This is consistent with Malshe and Friend (2018) who found that some customers may pose a negative attitude towards consultants because they get annoyed. Resistance contradicts the nature of the process, as lack of equity may restrain the possible value outcomes by posing a less facilitative environment for VCC (e.g. Fisher & Smith, 2011; Hoyer et al., 2010). Additionally, projects regarding streamlining organizations may be received with a higher degree of resistance as clients may experience a fear of being laid off, thus indicating that the degree of resistance can depend on type of project. Another inhibitor with similar facets is **supplier arrogance** (Aarikka-Stenroos & Jaakkola, 2012). This study partly agree that this inhibitor exists as the data shows contrasting views among the consultants and clients. Some of the respondents from Company A point towards arrogant consultants, which echoes Aarikka-Stenroos and Jaakkola's (2012) coining of the term 'super-

professionals'. They acknowledge that these exists, but also claim that it is a prejudice towards consultants as the nature of the service tend to create an arrogant impression due to asymmetry between knowledge bases. Yet, the majority of consultants in Company B cannot recognize this as a problem. Even though the challenge refers to human aspects, the difference can potentially be explained in the fact that Company A has spun off from a large international consultancy with a more individualistic culture, while Company B to a higher extent provide an impression of Scandinavian values and an egalitarian structure. Further, the respondents in Company A claim that since they work more interdisciplinary and experience-oriented, they are perceived less arrogant than P-KIBS. These insights thereby contribute to a more nuanced discussion around supplier arrogance, suggesting it to be an inherent part of the service delivery.

Overall, the data indicate that the inhibitors are connected and overlapping. For instance, this becomes evident in relation to customer participation and involvement as one reveal that actors are motivated to take part in the VCC process, but lack time and resources to do so. Additionally, it becomes evident that hurdles mainly strain VCC at the outset of the project or in the beginning of each iteration, particularly related to the activities *diagnosing needs* and *designing and producing the solution*. This can be explained in the complex and context-specific nature of VCC, as the team in each iteration can face new conditions, actors, and methods. However, the data indicate that understanding increase with time and involvement, and that the participants through the development of components in iterations get more insights, realistic expectations, and extend their skills. Thus, it is likely that one in the beginning will experience it more challenging to develop a 'Cupcake' than when one almost has built a 'Cupcake Tower', due to a steep learning curve. This can also explain why it did not appear any particular challenges in relation to *implementing the solution*. The findings thereby highlight the importance of every person in the team solving challenges when they appear, on a continuous basis. Moreover, this research could not find evidence for all previously identified challenges (Figure 3), which can be explained by the context-specific nature of VCC. Further, as the literature reviewed focused on KIBS, there can appear differences as this research particularly looked into T-KIBS. Consequently, one does not deny that these inhibitors can exists separately in other collaborations, but rather argue that e.g. lack of process understanding might be more evident in T-KIBS than P-KIBS due to the development process the participants are involved in. Additionally, it has not been possible to examine which inhibitors occur most frequently throughout the process because every

VCC process is unique, and due to the complexity of these projects, the interviews did not uncover enough details regarding the prevalence of hurdles.

Strategies for approaching inhibitors

This study proposes five fundamental strategies which the service provider can use to increase the chance of success, three of these are already described in previous literature (Figure 4), while two are contributions from this study. Firstly, coherent with Bettencourt et al. (2002) and Santos and Spring (2015) this research have identified **project management and planning** as a fundamental strategy both at the outset, and during the project. The strategy is highlighted as important by both firms, where one particularly emphasize the importance of contractual agreements to create structures and frames around the task to be solved (Bettencourt et al., 2002; Kukk et al., 2014; Lessard & Okakwu, 2016), ICT (Breidbach & Maglio, 2016; Breidbach et al., 2013), colocation, and regular and fixed meetings. Additionally, the data indicate that customer contribution that is planned beforehand is easier to complete (Kukk et al., 2014). Despite this, it becomes evident that one rarely follows the plans completely due to the iterative nature, complexity, and uncertainty that follows the process. Consequently, one emphasizes that the parties must be adaptable, and the consultants need to clearly communicate the projected process, potentially visualizing it through a circular project plan. Further, this research contributes to the literature on technology-enabled VCC (Breidbach & Maglio, 2016) indicating that digital and dynamic tools have a positive impact on the workflow in both cross-border and co-located projects. These tools were identified by both firms, and allows for increased productivity through closer collaboration, communication, and progress tracking. This shed a new light over Breidbach and Maglio (2016) who argue that email, video-, and teleconferencing positively impact VCC, as the consultants rather find Trello and Slack more efficient than email. Yet, teleconferencing appears to be important for meetings. In addition, ICT can be used to facilitate co-creation with a broad set of stakeholders and thereby reduce costs. However, whether ICT can be used to this extent appears to depend on corporate security policies.

Moreover, this strategy highlights the importance of colocation for success as this supports the agile methodologies and allow for both formal and informal interactions. Although the consultants emphasize the importance of project management and planning, it does not appear to be the only strategy that can solve specific issues as the initial model (Figure 6) indicate. The data from Company A and Company B rather show that all the strategies needs to be used in conjunction throughout the

VCC process to succeed. In this regard, project management and planning are important to keep the structures and frames of the task to be solved. Yet, it is not sufficient alone to avoid challenges to occur as many of them are related to participants involved and their understanding. It should therefore be complemented with the other strategies to put more emphasis on the relational aspects of the VCC process. In addition, it is evident that the team structure is characterized by egalitarianism, as all members share somewhat equal responsibilities. As a result, the challenges do not always need managerial involvement to be solved. Hence, one expands the current theoretical understanding of how project management is optimally executed in KIBS by emphasizing aspects that allow for a close dialogue and the opportunity to continuously solve issues.

Current literature highlights the importance of **client training and education** to decrease the asymmetry between the two party's knowledge bases, which this research confirms (Bettencourt et al., 2002; Kukk & Leppiman, 2016; Santos and Spring, 2015). This strategy is important to make the client feel safe in an uncertain and complex process, and the firms consequently execute it in the beginning of the collaboration through face-to-face contact to create trust (Eisingerich & Bell, 2006; 2008; Santos & Spring, 2015). Consultants in Company A seek to facilitate a safe and dynamic learning environment by holding information- and training workshops, which is tailor made for their clients to initiate a dialogue and transfer of knowledge (Bettencourt et al., 2002; Kukk & Leppiman, 2016). They also emphasize the importance of learning-by-doing, as the client for instance is involved in user-tests in each iteration. Company B agrees on the latter but seem to use training courses and presentations to facilitate learning. The difference in the performed activities between the cases can be explained by the larger emphasis on specific methodologies and creative thinking in Company A, than in Company B. A respondent from Company A also highlight the importance of continuous training throughout the project, because it can benefit the process with an extensive knowledge transformation between the organizations (Kukk & Leppiman, 2016). Further, the clients signalize that they enjoy and get motivated by the steep learning curve they experience from these activities (Auh et al., 2007; Büttgen et al., 2012; Eichentopf et al., 2011).

This research highlights **client socialization and team building activities** as a fundamental strategy for VCC in KIBS engagements. The interviews indicate that the most successful collaborations often entail interpersonal relationships beyond the professional domain, as the most important aspect of the collaboration are the individuals involved. Thus, one can assume that it is challenging for the VCC

process to succeed without socialization activities, as the success of the process depends on the relationship between the actors (Powers et al., 2016). Further, this supports Heikka and Nätti (2018) who argue that personal relationships are particularly important in KIBS engagements due to the abstract nature of the service delivery. Yet, this does not imply that the participants share values, norms, and behavioral patterns in the acquisition-phase (Santos & Spring, 2015). The teambuilding activities that are arranged in Company A and Company B rather refer to the encounter-phase of Mills (1986) typology. These activities aim to foster belonging, participation (Bettencourt et al., 2002; Böstrom, 1995; Büttgen et al., 2012), role clarity (Büttgen et al., 2012), and increased understanding of the process. Thus, suggesting increased interpersonal liking and trust, confirming Bettencourt et al. (2002). Having that said, it becomes evident that personal preferences influence the choice of socialization activities. For instance, some prefer small, repeated social activities on a regular basis (Büttgen et al., 2012), while others fancy bigger events such as larger organizational gatherings which include both educational and social components. A potential interpretation is thereby that this strategy is closely related to *client training and education*, as both strategies focus on the symbiosis one gets from interaction and collaboration.

By suggesting **creating a common ground** as a supplier strategy in the VCC process, this research extends the current theoretical understanding in the context of KIBS. This strategy involves aligning the contrasting views of the involved actors, both in terms of goals, vision and context. Company B highlights the importance of creating specific, relevant, and achievable goals as the clients often lack a sufficient understanding of the effects that can be gained from the digital solutions. Company A also emphasize the importance of goals by suggesting “guiding stars” and while complete agreement is not a requirement, one need to agree on a common path for the team. They also indicate that one by introducing visual elements can increase the teams’ understanding and thereby positively influence the collaboration. Company B are recommended to adhere from this but should have in mind that one need to be co-located to exploit these effects. Further, this research points out the connection between VCC in KIBS and the field of Service Design and Innovation (e.g. Kukkk et al., 2014; Scarco, 2015) by emphasizing the use of practical design methods during the process, like challenge statement, territory mapping, and customer journeys. One thereby point out the possibility to advance knowledge on how design methodology impacts VCC in the KIBS-client relationship, as it appears to influence how participants understand the journey they take part in.

Current research emphasizes the importance of communication in the VCC process, particularly in the initial phases (Aarikka-Stenroos & Jaakkola; 2012; Zieba & Pawel, 2017). This also becomes particularly evident in this research and one therefore suggest **clear and honest communication** as an additional supplier strategy which is fundamental to facilitate VCC towards success. This strategy aims at facilitating the reciprocal relationship and dialogue between the parties through honesty, understanding, and curiosity. Consistent with Bettencourt et al. (2002), consultants from both companies points out the particular importance of honesty. Yet, they admit that not everyone in their line of work act this way, but simultaneously perceive it to be a shift towards a culture where one not always need to have the 'right' answer. This implies the importance of 'telling the ugly truth' to create trust and clearly state their good intentions. As the establishment of trust is essential for VCC to unfold, it further highlights the importance of acting with integrity because the client's attitude towards the consultant seems to be more flexible and respectful when intentions are made clear. This argumentation leans towards Heikka and Nätti (2018) who argue that individual experts at KIBS can influence the VCC process through creation of trust. Further, the clients express that they perceive the consultants as trusted experts (Aarikka-Stenroos & Jaakkola, 2012).

Overall, one suggests that the five strategies are overarching as they aim at facilitating the parties' communication, collaboration, alignment, and interaction (Ballantyne & Varey, 2006). They also touch upon the components of VCC; VCP and ViU (Ranjan & Read, 2016). To exemplify, the majority of the strategies contains the components of VCP, as they guide the consultants in regard to organization, dialogue, and knowledge transfer in the project (Aarikka-Stenroos & Jaakkola, 2012; Bettencourt et al., 2002; Ranjan & Read, 2016). Nonetheless, one also arrives at the conclusion that the personal relationship and experience is important for a successful VCC process. This points towards the components of ViU as one highlight that the reciprocal relationship provides a personal experience. Through the interviews it seems like Company A puts a higher emphasis on ViU because they accentuate that every process is built around individuals and that the final solution is a result of both co-working and the personal transformation of the participants. This experience is metaphorically described as a curlicue where the respondent tell that one reaches the best ViU when one collaborates from start to finish, and even further. They argue that the customer often perceives this experience of high value, and therefore that co-creation can facilitate repeat purchase behavior due to satisfaction (Patterson & Spreng, 2005). Although Company B indicate that the process can be challenging for the participants to adapt to, they put a higher emphasis on describing the

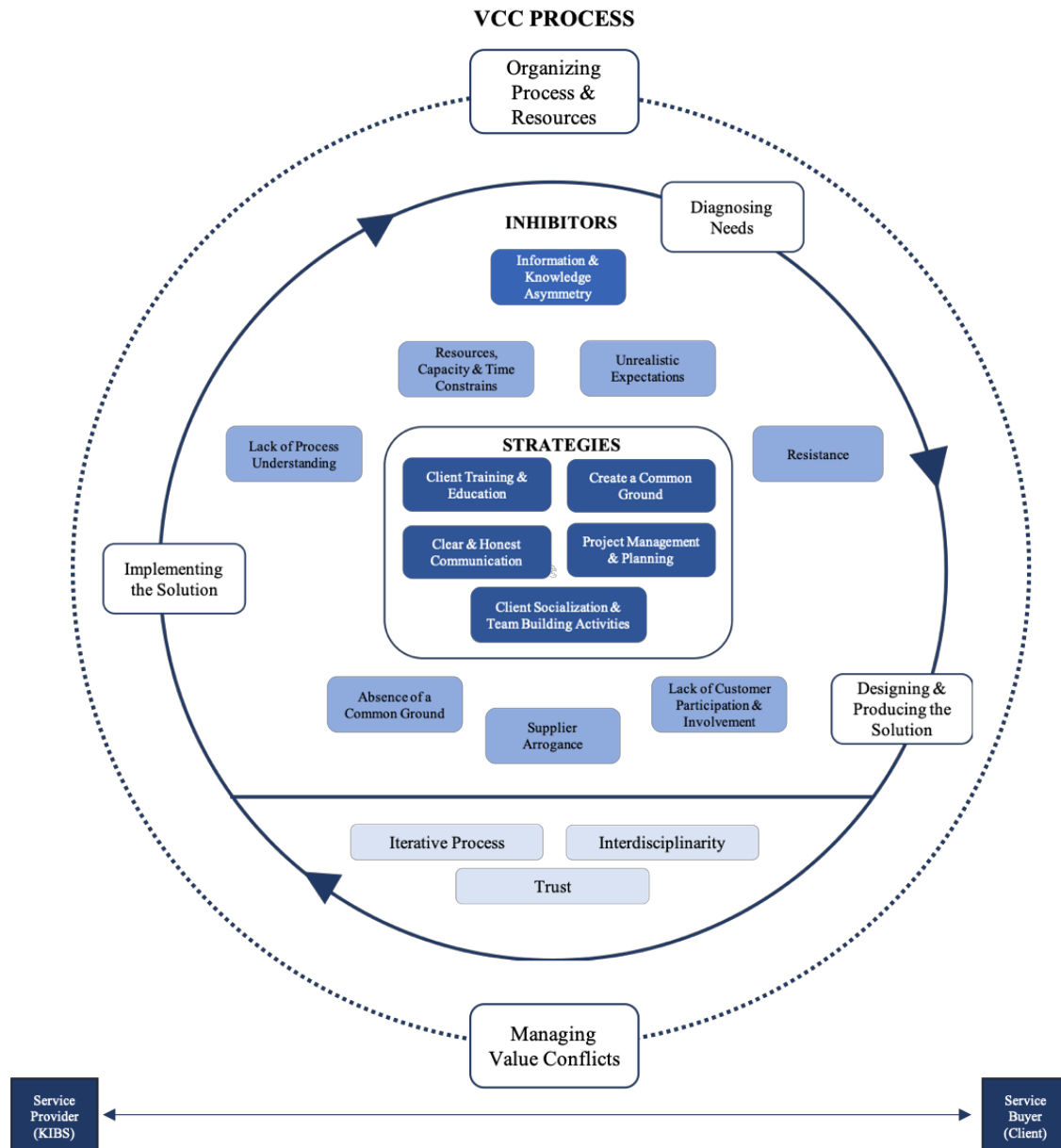
components of VCP than ViU. The differences between the firms can indicate that some consultants still not fully adapt towards the concept of co-creation, indicating that the shift towards SDL is still emerging. Additionally, it becomes apparent that the consultancies co-create with the client and other stakeholders to different extents, and that the teams' performance is contingent on the participants ability to co-create value, hence supporting Spohrer and Maglio (2008). One thereby argues that the strategies are overarching as they can be used in conjunction throughout the process to facilitate successful VCC.

All in all, the data clearly indicate that independently of how the challenges occur, it is vital to manage them to reach a successful collaboration (Lessard & Okakwu, 2016). There is no universal recipe on how consultants manage challenges that occur due to contextual aspects. The situational awareness of the consultants also impacts the understanding of the optimal way to manage the hurdles. For instance, some consultants clearly state how they prefer to solve challenges, while others put more emphasis on the context as some of the inhibitors might appear as a natural cause of the relationship. Consequently, both individual differences and context play a vital role when managing the straining elements, thereby confirming Heikka and Nätti (2018). In this regard, it is also important to know the client; their characteristics and needs. Exemplified, actions taken might be influenced by the length of the project (Heikka & Nätti, 2018; Kowalkowski, 2011; Kowalkowski et al., 2012), the number of stakeholders involved, and the degree of the client's experience with consultants. Strategies might also differ between project level and organizational level, as different inhibitors may appear at different levels. The clients' organizational culture might also impact which strategies are used, but one could not find clear evidence on how this differed in the cases. Yet, it is important to recognize that challenges also open for opportunities, which can lead to both dialogue and learning. This can positively affect the team, their process, and the symbiosis between the parties. The data thereby highlight the complex and dynamic nature of the VCC process and shows that it is impossible to claim a fixed set of inhibitors and strategies. One rather demonstrates that there exist common principles that consultants make use of and that can guide towards a common practice. One also believes that insights into these strategies can enable the client to be more aware of how one can act in challenging situations.

Conceptual model

Based on the analysis and discussion, this research contributes with a revised conceptual model (Figure 14) that illustrate the insights from Company A and Company B.

Figure 14: Revised Conceptual Model



Note. Created by the authors (2019)

The model still illustrates the two parties involved in the VCC process, hence service provider and service buyer, at the lower part of the model. The reciprocal relationship between the parties is illustrated as a bidirectional arrow. In between and above this arrow, there are two circles that

illustrate the VCC process which consists of five activities that take place in the collaboration. The outer circle entails the two activities; *organizing process and resources* and *managing value conflicts*. These activities appear to be overlapping, simultaneous, and must be addressed continuously throughout the process, which is illustrated by the dotted line. In contrast, *diagnosing needs*, *designing and producing the solution*, and *implementing the solution* is shown in the inner circle with a solid line and one-way arrows. This is because these activities follow a specific order, where one through several iterations and cycles within the projects analyze, develop, test, and implement solutions. Within this circle there are three common aspects, eight inhibitors, and five strategies that unfold, and which can impact the success of the VCC process.

At the bottom of the inner circle the model illustrates three aspects that facilitate the VCC process that was not identified in Figure 6; iterative process, interdisciplinarity, and trust. Trust is illustrated at the bottom as a fundamental prerequisite, as it is hard to manage VCC without it. The other two aspects facilitate the process in T-KIBS engagements as one through development of innovative, technological solutions need to involve a broad set of stakeholders through several iterations to meet the end-users need. Above these elements, one presents the eight inhibitors that may occur during VCC. These are placed in a random order to illustrate that it is difficult to determine which challenges occur when and how it impacts the process. Information and knowledge asymmetry are illustrated at the top of the circle, in a distinct color to emphasize its inherent existence in the process. Even though Figure 6 indicates that there is a connection between inhibitors and specific strategies, this research rather demonstrates that each inhibitor can be solved by a variety of strategies and often in conjunction. Consequently, the five strategies that are placed in the middle of the model can be used to facilitate the VCC process by either solving or avoiding challenges that occur. The responses have a random position in relation to each other as they can be used by several actors and at any stage of the collaboration to manage the inhibitors. Thus, although the strategies are identified by the service provider, one sees that the buyer also can get guidelines on how it is beneficial to behave. Overall, Figure 14 is circular to illustrate the highly iterative nature of the process the parties are involved in when they co-create value propositions. The shape mirrors the social construction of the phenomena where each instance of VCC pose the participants to a new situation which can involve special challenges. Thus, the model illustrates the complexity and dynamics of the VCC process in the two case companies.

7.0 Contributions, Limitations, and Further Research

This chapter provides the reader with an overview of the theoretical contributions, as well as the managerial implications of the research. It also identifies the limitations of the study and suggests topics and directions that are interesting to explore further.

7.1 Theoretical Contributions

This research extends the current theoretical focus on KIBS by focusing on the actual activities the firm perform in the relationship with client and address the research gap indicated by Durugbo and Schwetschke (2018) by looking into KIBS, a complex B2B system. The study aims at contributing to existing knowledge within the field by providing an empirical account of strategies that are used to manage inhibiting elements in the VCC process. One thereby contributes with a conceptual model (Figure 14) which illustrates the dynamics and complexity of the VCC process in KIBS engagements where each instance of collaboration is unique, and a variety of challenges can thereby transpire. The findings confirm that the VCC process and thereby the inhibitors occur through a dyadic problem-solving process between KIBS and client, and one suggest that trust, an iterative process, and interdisciplinarity are essential for the process' success. Further, one confirms that the client in each iteration can exert considerable influence on the formation of the value proposition (Aarikka-Stenroos & Jaakkola, 2012). Within this process the authors have identified eight inhibitors, whereby four are consistent with previous research (e.g. Aarikka-Stenroos & Jaakkola, 2012; Kukk et al., 2014; Santos & Spring, 2015). Information and knowledge asymmetry are highlighted as the root cause to all issues. Consequently, as it appears to be an inherent imbalance of specialization and skills in KIBS engagements it can complicate joint value creation, and this aspect should be further addressed in SDL. Yet, one urge participants to harness challenges as opportunities, and identify five strategies that can facilitate the VCC process towards success, whereby three are consistent with existing research (e.g. Bettencourt et al., 2002; Böstrom, 1995; Büttgen et al., 2012; Eisingerich and Bell, 2008; Santos and Spring, 2015). Although these responses emerged from the supplier perspective, it becomes evident throughout the data that the actors consider everyone to be responsible for a successful collaboration. Consequently, the strategies also provide guideline to other actors involved related to how it is beneficial to behave.

7.2 Managerial Implications

This research has several managerial implications for the actors involved in the VCC process. Firstly, most challenges occur at the outset of the project or in the beginning of each iteration, depending on the participants and the surrounding context of the project. Every collaboration consists of people with different academic background, knowledge, expertise, personality, experiences, and perceptions, which is important to keep in mind when planning the VCC process. By aiming for repeated purchases and long-term relationships, the client gain experience and process understanding which can make inhibitors efface. Yet, it is important to remember that many challenges occur as a natural consequence of the service delivery, and thereby appear as fragmented or simply as a part of human aspects. One therefore need to be continually aware of the potential pitfalls that can emerge, so that minuscule issues do not turn into actual challenges.

The beginning of the VCC process is of particular importance in newly formed relationships, as one need to get familiar with and trust each other in order to be able to co-create. The respondents regard trust as a cornerstone that needs to be established and nurtured, in order to provide mutual benefits. The process often demands a change in client's mindset, as the new situation might make them insecure. It is thereby important for the consultants to listen and act in an empathic and transparent manner, in order to make the clients comfortable with the upcoming journey. Additionally, one recommends consultants to arrange socialization and training activities both to establish social connections and decrease the asymmetry between the knowledge bases. This is particularly important as the knowledge needs to be developed through the symbiosis, since the consultant alone is unable to obtain sufficient knowledge to provide the 'right' answer.

Even though the project lead plays a vital role in the project by setting a structure for how the actors should collaborate, it becomes evident from this research that the five overarching strategies and practical examples do not necessarily require managerial oversight. Rather, all actors are responsible for the ability to co-create. In order to reach the optimal effect, the actors need to work towards a common goal and vision. Not all hurdles need involvement from the project lead, as participants independently of role and company can solve the challenges through an instance of VCC. Consequently, both service provider and buyer are equivalently responsible for the success of the collaboration. Yet, one should not forget that the consultants are the ones hired to solve the task as

the customers find it inefficient or are incapable to do it by themselves. Thus, it is important that the consultant respect the client; their time, capabilities, and resources.

However, there is no need to be scared of running into challenges as one through being brave, humble, and honest about these issues can increase trust, which can consequently lead to a closer relationship. It can thereby be important to enable constructive feedback, compliments, and continuous learning during the process. The consultants should neither be afraid to be personal nor refrain from injecting joy and laughter into the relationship by being a bit more fun and relaxed, while at the same time showing their expertise and competence. Further, one of the consultants in Company B feel the need for more evaluations after the projects are finished, especially in regard to sharing the inhibitors that occurs and how they were solved. One recommends KIBS to be more transparent internally and suggest that the companies can create a framework for evaluating the projects and an arena where this can be shared. One believes that this potentially can increase the chance of success as it can be easier for consultants to refer to best practices. Nonetheless, the challenges are not purely negative, as each situation is a possibility for learning, dialogue, and change towards the right direction. Thus, how the actors choose to approach the situation can have a huge impact on the collaboration.

7.3 Limitations & Further Research

This section entails a discussion around the limitations of the research and present possible further research. Bryman (2016) claim that it is impossible to keep a research free of limitations and highlight the importance of researcher's showing awareness regarding how one can minimize the effects of these, if possible.

This research represents a supplier perspective and provides insights into how consultants use various strategies to approach challenges during the VCC process. Consequently, it does not investigate the client's perception of how inhibitors best is managed, and it arise a need to scrutinize the topic from both perspectives. The researchers initially aimed to study the topic through the dyad but the interviews that were conducted with clients provided limited insights into which challenges the customer experience during VCC and how they choose to solve them. This can indicate that the clients were satisfied with the facilitation of the VCC process but can also be a case of social desirability bias as the client might restrain from discrediting the consultancy and their service. A potential

solution for further studies can be to study clients in the KIBS' portfolio who is not interrelated to the consultants. Yet, this provides narrow insights into the characteristics of the VCC process, and it can be more challenging to reveal connections between VCC, inhibitors, and strategies. When the dyad is understood, one can further analyze this topic in a network of multiple-stakeholders. The findings indicate that consultants involve a broader set of stakeholders when developing solutions and adapting this perspective can thereby contribute with more explanatory power than a singular, entity-level perspective that focus solely on buyer-seller relationships. Taking a network perspective is also in line with SDL, which this research is conceptually grounded in and it emphasize that all generic actors can be co-creators of value (Vargo & Lusch, 2016). Hence, broadening the research scope can provide a clearer understanding of which challenges that occur in which relationships, and makes it easier for the participants to know what activities are beneficial to perform.

Further, this research is limited to interviews with two case companies conducted at one single point in time. This implies that one might only have found fragmented pieces of knowledge and experience, and not a holistic picture of the inhibitors that strain the VCC process and its connected strategies. The respondents also worked on different projects which made it challenging for the researchers to get a proper understanding of it. As a result, this research provides a general understanding across a number of projects based on the respondents' experiences, and it could have been beneficial to investigate several projects thoroughly in order to understand the variety of projects the firm is involved in and how this might impact the inhibiting elements and success of the collaboration. In this regard it can also be interesting to conduct a longitudinal ethnographic study with the aim of examining behavior rather than meanings and attitudes. In this way it is easier to reveal if the inhibitors and strategies are connected to the different activities and which inhibitors that are most frequent and challenging to solve. Moreover, the findings cannot be considered statistically generalizable as they are conducted in a certain type of KIBS; T-KIBS, which can narrow the applicability of the results to other types of KIBS, as well as other service companies. A broader set of cases, e.g. including multiple T-KIBS, can open up for more variability and possibly new insights into the topic. A possibility is thereby to complement the current qualitative method with quantitative research as a next step, by e.g. conducting a questionnaire with consultants across several firms to reveal which inhibitors that occur and how they are managed. One believes that this will increase the transferability of the findings, as one can reveal which inhibitors and strategies that are statistically significant within the domain of T-KIBS, which can complement the conceptual model. It is also of

interest to see whether P-KIBS experience the same challenges considering their varied knowledge bases. Conducting research through several steps would support the abductive nature of the research, as the authors can visit the data from various angles several times and increase its credibility further through triangulation. Quantitative research through surveys can also potentially be less biased as it can be anonymized. However, with time and resources in mind, one considers the current sample and technique used to be sufficient to provide an initial understanding of the theme.

Moreover, this research is guided by a conceptual model built on existing literature on VCC in KIBS engagements. This can limit the researcher's understanding of the topic, as well as delimiting aspects and contributions as they have been active throughout the process. Nonetheless, one found it to be essential to delimit the literature and scope to these domains in order to get a proper understanding of the field and relevant aspects. Thus, one acknowledges that other fields could have been explored, such as project management, relationship management, teams, agile software development, and design thinking in relation to KIBS engagements. Further, the researchers acknowledge the complexity and uniqueness of the VCC process, and as this research is solely conducted with Norwegian firms it does not consider how cultural differences impacts the findings. This can be an area of further research as people with different ethnic or cultural background may experience the VCC process in contrasting ways. One also recognizes that gender-differences may occur, but that it did not appear as a significant aspect in this research. In spite of these limitations, the researchers consider the study to be relevant for organizations and one believe that it is a valuable contribution.

A key intention of this research was to start a discussion around the more challenging aspects with VCC in KIBS engagements, particularly looking at new technology development and which best practices that exist. In this regard, one has revealed several aspects that can be interesting to research further. First, in line with Heikka and Nätti (2018) and Kowalkowski (2011) this research indicates that VCC might differ due to the length of the project and thereby the challenges may vary. Respondents tell that longer projects often experience fewer inhibitors due to increased knowledge on how KIBS are working and a stronger relationship. It can thereby be interesting to investigate to what extent the length of projects impact challenges and how one adapts strategies accordingly. Moreover, one finds differences between working with experienced and inexperienced customers, which can be further researched to help consultants approach the clients appropriately. Additionally, as the consultants indicate that there are differences between the challenges that occur within the team

and the rest of the organization, one should investigate how apparent these differences are and what they mainly concern, and to that end become better at managing the relationship with the client. This also becomes a relevant issue as multi-stakeholder involvement is of great importance for the performance of the projects and its ability to co-create. Moreover, further research should look deeper into technology-enabled VCC (Breidbach & Maglio, 2016), and explore how this can be facilitated by using virtual, dynamic interfaces. One can potentially look into how tools like Trello, Slack, Mentimeter, and cloud computing impacts VCC in KIBS engagements. In relation to this, it also becomes evident that one should explore which inhibitors and strategies that exists particularly in distributed teams, and it can be relevant to study the connection between ICT and VCC in projects that are globally dispersed and where participants are spread over different physical locations.

8.0 Conclusion

Most industries today face growing complexity in relation to specialization, knowledge intensiveness, and technology (Jacob & Ulaga, 2008; Miles et al., 2018; Möller, 2006). This creates opportunities for business transformation, but many firms lack competence and ability to achieve this alone. Consequently, they engage KIBS to facilitate and carry out innovative solutions through the VCC process (Aarikka-Stenroos & Jaakkola, 2012; Den Hertog, 2000). The process can be described as dynamic, uncertain, and complex, and pose special requirements in relation to sharing of knowledge and resources as the client is expected to co-create with the consultants continuously (Aarikka-Stenroos & Jaakkola, 2012; Tuli et al., 2007; Spohrer & Maglio, 2008). Consequently, it may arise challenges that can strain the VCC process. Yet, there is limited insights into which aspects that needs to be avoided to work towards a successful process and how it can be managed in practice (Aarikka-Stenroos & Jaakkola, 2012; Durugbo & Schwetschke, 2018; Kukk et al., 2014; Lessard & Okakwu, 2016; Marcos-Cuevas et al., 2016). The purpose of this study was therefore to advance theory on how inhibitors that strain VCC in KIBS engagements can be managed by the service provider to facilitate successful collaborations. To investigate this, one looked into literature on KIBS, VCC, identified inhibitors in the VCC process and supplier strategies, which resulted in an initial conceptual model (Figure 6). This conceptual model was brought into the research process where one completed a qualitative mono-method through a multiple case study with Company A and Company B. Data collection consisted of ten semi-structured interviews mainly taking a supplier perspective.

The findings from Company A and Company B were combined into a revised conceptual model (Figure 14). The data revealed that the VCC process consisted of the five collaborative activities suggested by Aarikka-Stenroos and Jaakkola (2012), as well as one revealed three aspects that were apparent in both cases; trust, iterative processes, and interdisciplinarity. Within this process, one can co-create value to different extents, and the consultants emphasized that the higher degree of co-creation the better the end-result. Further, eight inhibitors were found in the two cases that could arise throughout the process, where information and knowledge asymmetry appeared to be inherent in the process and a root cause of the others. It is thereby essential to be aware of how one can decrease the imbalance of specialization and skills in order to align the parties. Despite this, the biggest challenge the consultants faced was related to resources, as the client often lack capacity and time to be extensively involved in the process. Yet, the customer seemed to find joy and motivation in co-

creating together with the consultants. In addition to this newly discovered challenge, one revealed three other challenges in the two cases that not yet were identified in literature; lack of process understanding, absence of common ground, and resistance. These challenges may have arisen as the cases were two T-KIBS, and the client bought a new way of working that demands a change in mindset. Further, the research confirmed three challenges identified in literature; unrealistic expectations, lack of customer involvement and participation, and supplier arrogance (Aarikka-Stenroos & Jaakkola, 2012; Bettencourt et al., 2002; Santos and Spring, 2015). Overall, it is important to have in mind that a client consist of many different actors with several views, and whether inhibitors arise or not depends on individual and context-specific aspects.

Moreover, the research identified five overarching strategies; project management and planning, client training and education, client socialization and team building activities, create a common ground, and clear and honest communication. These can be used as guiding principles at any stage of the process to either manage or avoid inhibiting elements, thus facilitating successful VCC. Yet, there is no unique way to solve the hurdles and it becomes evident that it is important to create a relationship built on trust, dialogue, and where one promotes shared problem-solving with mutual benefits. In essence, the VCC process is about human-to-human interactions and what these individuals manage to create together. Consequently, the personal relationship beyond the professional domain became important, and one highlight that one should be humble, brave, and honest with each other. Everyone should take responsibility for the team's success by grasping the challenge at its root to avoid unfortunate synergies, and the suggested responses can guide towards this behavior. Having that said, it is natural that challenges transpire, and one recommend the actors to rather look at the situations as an opportunity for learning, dialogue, and change towards the desired direction. These learnings should be gathered in an internal arena where various experiences can be shared and discussed.

Comprehensively, this research has contributed to the field of KIBS and VCC literature by providing a detailed examination of which inhibitors that unfolds in VCC in the context of KIBS engagements, and which responses that usually are applied to manage them. Yet, as with any study there exist limitations and possibilities for further research. As this study looked at inhibitors from the supplier perspective, it arises a need to explore the topic both from the dyad and in the network. In addition, it can be beneficial to broaden the sample to open up for more variability and new insights into the topic.

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Appendix 1. List of Abbreviations

<u>Abbreviation</u>	<u>Full Form</u>
B2B	Business-to-business
B2B2C	Business-to-business-to-consumer
C-KIBS	Creative-intensive business services
ICT	Information and communication technology
KIBS	Knowledge-intensive business services
P-KIBS	Traditional professional services
RQ	Research question
SDL	Service-dominant logic
T-KIBS	Technology-based services
VCC	Value co-creation
ViU	Value-in-use
VCP	Value co-production

Appendix 2. Ten foundational premises of SDL

FPs	Original foundational premise	Modified/new foundational premise	Comment/explanation
FP1	The application of specialized skill(s) and knowledge is the fundamental unit of exchange	Service is the fundamental basis of exchange	The application of operant resources (knowledge and skills), “service,” as defined in S-D logic, is the basis for all exchange. Service is exchanged for service
FP2	Indirect exchange masks the fundamental unit of exchange	Indirect exchange masks the fundamental basis of exchange	Because service is provided through complex combinations of goods, money, and institutions, the service basis of exchange is not always apparent
FP3	Goods are a distribution mechanism for service provision	Goods are a distribution mechanism for service provision	Goods (both durable and non-durable) derive their value through use – the service they provide
FP4	Knowledge is the fundamental source of competitive advantage	Operant resources are the fundamental source of competitive advantage	The comparative ability to cause desired change drives competition
FP5	All economies are services economies	All economies are service economies	Service (singular) is only now becoming more apparent with increased specialization and outsourcing
FP6	The customer is always a co-producer	The customer is always a co-creator of value	Implies value creation is interactional
FP7	The enterprise can only make value propositions	The enterprise cannot deliver value, but only offer value propositions	Enterprises can offer their applied resources for value creation and collaboratively (interactively) create value following acceptance of value propositions, but can not create and/or deliver value independently
FP8	A service-centered view is customer oriented and relational	A service-centered view is inherently customer oriented and relational	Because service is defined in terms of customer-determined benefit and co-created it is inherently customer oriented and relational
FP9	Organizations exist to integrate and transform microspecialized competences into complex services that are demanded in the marketplace	All social and economic actors are resource integrators	Implies the context of value creation is networks of networks (resource integrators)
FP10		Value is always uniquely and phenomenologically determined by the beneficiary	Value is idiosyncratic, experiential, contextual, and meaning laden

Words in bold type represent changes in wording from the original FPs (Vargo and Lusch 2004a, 2006).

Note. Adapted from Vargo & Lusch (2008, p. 7)

Appendix 3. Interview Guide Consultant

Supplementary data can be provided on request.

Appendix 4. Interview Guide Client

Supplementary data can be provided on request.

Appendix 5. Company A Transcriptions: A1, A2, A3, A4

Supplementary data can be provided on request.

Appendix 6. Company B Transcriptions: B1, B2, B3, B4

Supplementary data can be provided on request.

Appendix 7. Client Transcriptions: C1, C2

Supplementary data can be provided on request.

Appendix 8. Coding Scheme

Data/ Concept	Main Category	Main Codes	Sub Codes	Example	Frequency	Kappa	Agreement
Data-driven	Company, Projects & Roles	Company Info	Company A	"In the long run, we of course want to take over the world *laughter, then we can just approach a firm like: you dont need that ad agency; because we understand your business holistically" (A1, 16).	14	0,76	99,83
			Company B	"We haven't really put it together in the way of having dedicated teams towards different sectors, but rather dedicated teams within one definite area of competence in order to help several sectors." (B4, 4).	6	0,87	99,84
Data-driven	Company, Projects & Roles	Company's VCC Process	Company A	"One need insights into the world and reality of the end-user, not the world the client want them to be in. You need to have an outside-in perspective and understand which language they use, where they get information from, and what they hear from their grandmother, friend, or colleague" (A2, 110).	81	0,49	96,32
			Company B	"We should understand their business, their goals and which obstacles that hinders them in achieving these goals" (B3, 141).	36	0,63	98,55
Data-driven	Company, Projects & Roles	Project Information		"The project is about creating and developing a nex service for the SMB-market, making it easier for the client's customers to control subscribed phones." (A1, 18).	45	0,75	98,66
Data-driven	Company, Projects & Roles	Role Information		"My role in the beginning was to lead a design-team consisting of two designers from Aschehoug, and two of our designers. I initiated the process of how they were working both internally as a team, but also in consonance with the rest of the organization." (B3, 29).	46	0,49	99,31
Data-driven	Inhibitors to VCC	Absence of a Common Ground		"One of the greatest challenges in digitization projects and processes is the inadequate focus on what kind of goals that is aimed for, or what the client should gain from their investment" (B2, 113).	24	0,61	98,88
Concept-driven	Inhibitors to VCC	Customer Participation & Involvement		"I'm not doing projects without the client because then they screw up for themselves for two reasons: First, they need to learn. Second, when we pull out they are the ambassadors for the service, product or process" (A1, 142).	38	0,42	97,58
			Lack of ownership	"It is important that the client participate and gain ownership. Perhaps ownership is the most important factor" (A3, 31).	20	0,42	98,56

			Low dedication	"Sometimes you can feel that the people are dedicated, skilled, quick learners and just runs with it, performing well. On other occasions, both them and us sense that we must do it all together. I want us to be involved all the way to the finish line, and really you are never completely done." (A1, 150)	15	0,66	99,45
Concept-driven	Inhibitors to VCC	Information & Knowledge Asymmetry		"They like to share, but lack control over what they possess, and it is therefore challenging for them to locate the information. Much of it is experience-based or verbally shared between the employees, almost like a fairy tale tradition; they have walked around telling stories, but nobody have ever written it down" (B3, 116).	88	0,73	96,69
			Inability	"On most occasions, it is both yes and no, my thoughts is that they are either experienced/skilled, or they are not, its no in-between." (A4, 72)	13	0,68	99,39
Data-driven	Inhibitors to VCC	Lack of Process Understanding		"Half of our job as consultants is to guide the whole team through this way of working, which is different from what they are used to" (A4, 26).	86	0,64	96,61
			Clients do not see the value of Insight Phase	"My experience is that the biggest challenge is to help the customer understand our approach and our way of working. The fact that consultancies like Company B or others have their understanding on what to do, but it is not always easy to convince the customer that it makes sense." (B2, 28)	21	0,57	98,75
			Clients have a preset mind	"The CTO was in the core team... He stated "No, we just need to do this. We need to implement this system" (A4, 26).	22	0,83	99,45
			Low Tolerance & Flexibility	"We manage to collaborate. We manage to find a solution if something is unclear. There is no conflicts around how we should solve it. We find solutions if someone screw up" (C2, 99).	7	0,68	99,64
			Time To Market	"Time to market is often more important than launch something of quality, which might be a dilemma for some... The problem is that if you have a short time to market and launch something, but it is bad, then you are losing momentum. However, if you were thinking iteratively for the whole process, and then launched in smaller groups while continuously learning, the time to market should be much better." (A1, 33-35)	7	0,77	99,84
Data-driven	Inhibitors to VCC	Resistance towards KIBS		"One aspect is that we cost three times as much as the internal employees, hour by hour. Another aspect is that we build up our own knowledge base and then leave to the next customers. So I experience a scepticism towards that; why build up the expertise of the consultants and not our own employees?" (A2, 134).	36	0,51	98,4

			Control Issues	"They cultivate that they are in control over everyone, every process, and every decision, and perceive the consultants to be there for very delimited tasks" (B3, 73).	16	0,52	99,41
Data-driven	Inhibitors to VCC	Resources, Capacity & Time Constraints		"Most customers underestimate the needed resources and capacity to develop and launch a digital service in 2019. They often assume that they just need a couple of developers before they can kick-start the process" (A4, 74).	49	0,4	97,22
			Discuss Consequences	"Then you need to highlight the consequences. State that we are going to deliver the best possible solution to you, therefore we need your help. We can't help you unless you help us" (B2, 89).	6	0,67	99,8
			Distance	"It is especially important when you are not in the same city, for example when we worked with Client, and their whole team were in Rogaland while we were here, and then it becomes an us-against-them issue in the collaboration" (A4, 30)	16	0,66	99,32
			Role Clarity	"What really comes to my mind is the project leader at Client, who hadn't understood her role" (B4, 63).	10	0,78	99,19
Data-driven	Inhibitors to VCC	Supplier Arrogance		"I believe all consultants have a risk of being perceived as arrogant. Mainly since we deliver something they have been unable to deliver themselves. In effect the nature of the service may have a tendency to create this impression" (A4, 114).	60	0,75	97,35
Concept-driven	Inhibitors to VCC	Unrealistic Expectations		"I have had high expectations because I know I work with competent people. With these great people I expect us to create excellent things of high quality" (C1, 133).	29	0,48	97,21
Data-driven	Other elements	Interdisciplinary		"Even a psychologist can be the most influential in deciding on a future strategy" (A1, 163).	15	0,64	99,5
Data-driven	Other elements	Iterative process		"It is about reducing the time of planning. Instead of looking at a two-year perspective, you plan for a week, or maybe a month. And then you evaluate the result and adjust the course along the way towards the goal you want to achieve" (B2, 68).	43	0,56	97,85
Data-driven	Other elements	Trust		"If you lack trust you won't achieve anything" (B1, 161).	45	0,7	98,28
Data-driven	Length of Project			"I believe many of the inhibitors in longer projects becomes less visible because you got time to solve them along the way. While in shorter projects, it's like GO-GO-GO" (A4, 143).	6	0,46	99,62

Data-driven	Strategies	Clear Communication	Ask Questions	"It is essential to ask a lot of questions, because you do not understand all the aspects." (B1, 61).	18	0,81	99,71
		Be Honest & Genuine		"Be honest. Genuine." (B2, 215).	15	0,79	99,73
		Be Open		"We have consciously published all of the design materials and half-finished prototypes openly on the intranet, for everyone to have a look at them whenever they like. We aim to be highly transparent in our work." (A3, 48).	14	0,7	99,3
		Curiosity		"I try to inspire them to be a little curious and think: Why are we doing this? For who? And what value should it create?" (A1, 37).	11	0,73	99,69
		Use the same language		"Some things you just do not understand when they explain it, because they speak a completely different language" (C2, 65).	6	0,41	99,58
Data-driven	Strategies	Client Socialization & Team Building activities		"Pub crawls where the boss starts to strip, but actually nice events such as birthdays to show that one care about each other" (A1, 288).	36	0,85	99,24
		Be Personal		"She dared to tell if she was not doing so well, asked about how your kids were doing, and she remembered everything we had talked about before" (A4, 44).	4	0,66	99,91
		One Team		"In a way, we agree on what we are going to create. It is not like, when I get to work, you are from Company X and I am from Customer Y, or vice versa. We work on the same problems, and we are doing it together, so I do not think about that at all during the day." (C1, 32).	28	0,44	97,93
Data-driven	Strategies	Client Training & Education		"The client need practical experience in a safe environment. We join them while they experiment and learn new things" (B1, 133).	44	0,69	98,4
Data-driven	Strategies	Create a Common Ground		"A problem in the collaboration is that one is unable to achieve a clear understanding of what problem are we actually trying to solve. The Challenge Statement is a really good starting point because then everyone in the room has said that "Okay, we agree that this is what we should solve and what we pay for" (A4, 18).	38	0,52	98,12
		Shared Problem Solving		"Yes, that's one of my focus areas in my current project" (B2, 240-241).	19	0,68	99,05

			Visual Elements	"My idea is that we to a greater extent create short and simple messages on posters that we put up in the office, or by the coffee machine, which is reminders of the vision, the goals, and the ownership of what create together" (A2, 114).	14	0,47	99
Data-driven	Strategies	Project Management and Planning		"The chance that something goes wrong is unlikely if you make good preparations, align the team to clarify roles and tasks, communicate enough with the customer, and agree on the prerequisites and vision" (B4, 30).	38	0,57	98,1
			Collocation	"It is really important to sit, work, eat lunch, and take coffee breaks together to create a good working environment" (A3, 63).	38	0,84	99,15
			Contractual Agreements	"At the outset of the project one need to develop a general roadmap with some simple statements that describes the actual scope, which needs to be physically signed by several central people within the client organization" (B4, 18).	11	0,6	99,38
			Discuss Roles	"We have discussed the elements where help is needed, received knowledge about their domain, and obtained insights about the client, the firm, and clarified roles and mandate.. The mandate specify the tasks and responsibilities of the involved parties" (A1, 91).	12	0,91	99,82
			ICT	"Trello was vital for us, as it allowed us to clarify the responsibilities and deadlines since many of the project members did not work full time" (A4, 54).	14	0,82	99,59
Concept-driven	Value Co-Creation			"We are totally dependent on the symbiotic relationship that we obtain by working together, and the effect of it, as we can combine the clients knowledge, experience, and ownership with our specialized competence" (A3, 140).	57	0,79	98,45
Data-driven	Various Experience among Clients			"Some customers have experience with all the consultancies in Oslo, and knows exactly what they get from whom. While others have never used a consultancy before, and then it's like adult education." (A1, 84).	18	0,82	99,57

Overall unweighted kappa: 0,66

Appendix 9. Summary of Findings with theoretical background

Observation	Company A	Company B	Client	Theoretical Support
Inhibitor				
Resources, Capacity & Time Constraints	A1, A2, A3, A4	B1, B2, B3, B4		Valcas et al., 2016; Töllner et al., 2011
1. Capacity	A1, A2, A3, A4	B1, B3, B4	C2	
2. Competence	A1	A1		
3. Lack of role clarity	A2	B1, B3, B4		Aarikka-Stenroos & Jaakkola, 2012; Bell & Eisingerich, 2007; Bettencourt et al., 2002
4. Distance	A4	B1, B4		
Information & Knowledge Asymmetry	A3, A4	B1, B2, B3	C1, C2	Aarikka-Stenroos & Jaakkola, 2012; Gunnesson, 1978; Kuuk et al., 2014; Thakor & Kumar, 2000; Ojasalo, 2001; Wood, 2002
1. Inability to articulate needs and wants	A1, A4	B2		Lapierre, 1997; Mitchell, 1994; Ojasalo, 2001
2. Inability to make decisions	A3	B2	C2	Kuuk & Leppiman, 2013; Ojasalo, 2001; Patterson & Spreng, 2005
3. Reluctance to share political and sensitive organizational information	A4	B3		Malshe and Friend, 2018
Unrealistic Expectations	A1, A3, A4	B2, B3		Aarikka-Stenroos & Jaakkola, 2012; Heikka & Nätti, 2018; Kuuk & Leppiman, 2013
1. Depends on degree of experience with consultants	A1, A2, A4	B2, B4		
Lack of Customer Participation & Involvement	A1, A2, A3	B1		Aarikka-Stenroos & Jaakkola, 2012; Bendapudi & Leone, 2003; Malshe & Friend, 2018; Petri & Jacob, 2016; Santos & Spring, 2015; Valcas et al., 2016
1. Lack of ownership	A2, A4	B1, B2		
Lack of Process Understanding	A1, A2, A3, A4	B2, B3		
1. New way of working => Insecurity	A2, A3, A4	B2	C1, C2	
2. Change mindset	A3, A4	B1	C2	
3. Clients possess an Inside-Out perspective	A1, A4	B2		
4. Expect simultaneous development	A1, A3, A4	B2, B3		
5. Production mode	A1, A4	B3		
Absence of Common Ground	A1, A2, A4	B2, B3, B4		
1. Absence of common goals and vision	A4	B2, B3, B4		
2. Absence of a common understanding	A1, A2, A4	B3, B4		
Resistance	A1, A2, A4	B1, B3, B4		Malshe & Friend, 2018
1. Control Issues	A2, A3, A4	B3		
2. Supplier Arrogance	A1, A2, A4	B4		Aarikka-Stenroos & Jaakkola, 2012

Note. Created by the authors (2019)

Appendix 9. Summary of Findings with theoretical

Observation	Company A	Company B	Client	Theoretical Support
Strategy				
Project Management and Planning		B4		Bettencourt et al., 2002; Kukk et al., 2014; Santos & Spring, 2015
1. <i>Contractual Agreements</i>	A1, A2	B1, B2, B4		Lessard & Okakwu, 2016
2. <i>ICT</i>	A4	B1	C2	Breidbach & Maglio, 2016; Breidbach et al., 2013
3. <i>Collocation</i>	A2, A3, A4	B1, B2, B3, B4	C1, C2	
4. <i>Meetings</i>	A1, A3, A4	B1, B3, B4		
Client Training & Education	A1, A2, A3, A4	B1, B4	C1, C2	Bettencourt et al., 2002; Eisingerich & Bell, 2006; 2008; Kukk & Leppiman, 2016; Santos & Spring, 2015
1. <i>Knowledge transfer through training programs, workshops, and learning-by-doing</i>	A1, A2, A3, A4	B1	C1, C2	Bettencourt et al., 2002; Kukk et al., 2014; Kukk & Leppiman, 2016
2. <i>Inspiration & Motivation</i>	A1, A3	B4		
Client Socialization & Team Building Activities	A1, A2, A3, A4	B1, B2, B4		Bettencourt et al., 2002; Böstrom, 1995; Büttgen et al., 2012; Santos & Spring, 2015
1. <i>Kick-off</i>	A1, A2, A4	B1	C1	Bettencourt et al., 2002
2. <i>Activities outside working hours</i>	A1, A2, A3, A4	B2	C1, C2	
3. <i>Small acts of love at work</i>	A2	B2	C1, C2	
4. <i>Be personal</i>	A1, A4	B4		Heikka & Nätti, 2018
Create a Common Ground	A1, A2, A3, A4	B3		
1. <i>Guiding Stars</i>	A2	B2, B3		
2. <i>Visual Elements</i>	A2, A3, A4			
Clear & Honest Communication	A1, A2, A3, A4	B1, B2, B3, B4		Aarikka-Stenroos & Jaakkola, 2012; Zieba & Pawel, 2017
1. <i>Be open & honest</i>	A1, A2, A3, A4	B1, B2		
2. <i>Reciprocity</i>	A1, A2			
3. <i>Ask questions</i>	A1	B1, B2, B4		
4. <i>Create a common language</i>	A3		C2	

Note. Created by the authors (2019)