
Lysanne Lessard
University of Ottawa
lysanne.lessard@telfer.uottawa.ca

Chidimma Priscilla Okakwu
University of Ottawa
cokak064@uottawa.ca

Abstract

Knowledge-intensive business services (KIBS) such as management consulting, research and development, and IT outsourcing, have become a key component of most industrialized economies. As such, there has been a growing number of empirical studies investigating the way in which KIBS providers, clients, and partners collaboratively create value. These studies provide an important opportunity to improve our understanding of how value cocreation unfolds in the specific context of KIBS engagements. However, their results remain dispersed across the literature and can be difficult to compare. We present an integrated framework of value cocreation enablers and mechanisms developed through a research synthesis integrating the empirical results of 24 articles on this topic. The framework can serve as a basis to guide the design of KIBS engagements. The method of research synthesis is also shown to be a promising means of strengthening the collective knowledge base on service systems.

1. Introduction

Knowledge-intensive business services (KIBS) include services such as engineering services, management consulting, and IT outsourcing. Because firms offering such services contribute in an important manner to their clients’ productivity and innovation capabilities, this sector has become a key component of most industrialized economies [1]. KIBS are characterized by their knowledge-intensity in the sense that they rely on expert employees and/or provide knowledge-based solutions to their clients; moreover, clients are typically involved in the co-production of these solutions, and provider–client exchanges tend to be of a relational rather than transactional nature [2-4].

Value cocreation has emerged as a central concept to understand how actors co-determine and cocreate benefits for themselves and others in contemporary markets and economies [5]. Within the context of KIBS, the concept of value cocreation helps to move beyond sector-based definitions and focus on the knowledge-based, collaborative relationships that are required to create value from the perspective of participating actors [6].

Indeed, value cocreation is based on the understanding that economic value is derived from the ability to use goods and services as resources, rather than from the exchange of goods or services as assets [7, 8]. From this perspective, the customer is involved in creating offerings and is the final arbitrator of value, determined in relation to the actions and interactions made possible by acquired resources [7]. Thus, ongoing dialogues and relationships among customers and other network actors, as well as the alignment and reconciliation of their values, are needed to create successful offerings [7, 9]. This leads to a collaborative process where each actor applies its specialized knowledge and skills (operant resources) for the benefits of others and its own as well [10]. The underlying argumentation is that all entities – whether individuals, organizations or countries – possess specialized knowledge that is useful in the process of exchange. Each of these entities can be understood as a service system – an arrangement of people, technology, information and more – able to access, adapt and integrate resources [8]. Value propositions, if they are accepted by beneficiary systems, connect service systems. This emphasizes the interdependence of service systems that must collaborate in mutually beneficial ways to improve their well-being.

Within the body of research devoted to better understanding and supporting value cocreation in service systems, a growing number of empirical studies have investigated the way in which value is cocreated in knowledge-intensive business service (KIBS) engagements. Some of these studies point to the possibility that value cocreation unfolds differently in KIBS engagements than in other types of service systems [6]. For example, it has been proposed that coproducing solutions with clients is a necessary component of value cocreation in KIBS engagements [11], whereas seminal literature on value cocreation views coproduction as an optional component [10]. Also, while the customer service experience is often taken to be a cornerstone of perceived value in service [12], well-orchestrated stakeholder interaction may be more important in KIBS engagements [13].

Synthesizing the knowledge generated by these studies could help to identify specific dimensions of value cocreation in varied contexts, and to increase successful outcomes such as innovation from KIBS.
engagements. This research is thus guided by the question “how does value cocreation unfold in KIBS engagements?” To harness the rich findings in existing research and put individual studies’ results into dialogue with one another, we conducted a research synthesis of empirical studies investigating this phenomenon. This approach allowed the creation of an integrated framework of value cocreation enablers and mechanisms in KIBS engagement. The term research synthesis rather than literature review emphasizes that we did not aim to synthesize key concepts on the topic of value cocreation, but rather the results of primary empirical studies [14, 15].

The remainder of the article is structured as follows. First, we present the conceptual framework guiding our research and the methodology used to select and synthesize results. We then present an overview of selected studies, followed by the integrated framework created through their analysis and synthesis. We present the individual components making up the integrated framework, and those components that selected literature shows to be core to the framework. Finally, we briefly discuss the insights provided by these results, and conclude with limitations and future avenues for research.

2. Conceptual framework

The objective of this research is to create an integrated framework of value cocreation mechanisms in KIBS engagements from extant literature. Our understanding of mechanisms is based on the critical realist philosophy, which views the world as an open system where underlying mechanisms generate events and outcomes; these can then be observed in the world when actualized in a given context [16]. Two types of mechanisms can be found in organizational settings such as KIBS engagements: “causally relevant” higher-level mechanisms such as trust, and “causally efficacious” lower-level mechanisms composed of entities and their interactions, such as managers and enterprise owners’ decisions and the interaction between those [17]. The latter type of mechanisms are sometimes referred to as causal processes (not simply sequences of tasks) [18]. In this research, we refer to higher-level mechanisms such as trust as enablers (or inhibitors) of value cocreation processes, and to lower-level mechanisms as causal processes.

At a practical level, critical realism leads to investigations of empirical events in terms of which mechanisms may lead to which outcomes in which contexts, in the form of “context + mechanisms = outcomes”, or CMO [19, 20]. In this research we use the CMO perspective to synthesize the results of empirical studies of value cocreation in KIBS engagements; indeed, identifying contextual variables, enablers or inhibitors, causal mechanisms, and value outcomes reported in extant literature makes their results comparable, hence possible to integrate.

3. Methodology

To achieve our research objective and operationalize the research synthesis following a CMO perspective, we combined two sets of guidelines and two analytical techniques. The first guideline, CIMO- (Context, Intervention, Mechanisms, Outcomes) logic provides the overall understanding and techniques for integrating empirical results in extant literature [14]. The “I” in CIMO logic stands for the interventions managers have at their disposal to influence others’ behaviour [14]; in line with the two-level understanding of mechanisms presented earlier [17], we take managers’ actions to be part of causal processes, or lower-level mechanisms. The “M” in CIMO-logic was then understood to refer to higher-level mechanisms. Since higher-level mechanisms such as trust are often referred to as enablers in literature, we thus searched for context (C), causal processes (I), enablers or inhibitors (M), and value outcomes (O) in selected studies. Conducting a research synthesis based on CIMO-logic is done in two rounds. In the first round, an initial theory is developed from CIMO elements identified in seminal literature on the topic of choice. In the second round, a wider body of literature is searched, using keywords and a backward snowballing technique to identify additional CIMO elements and refine the initial theory. However, CIMO-logic adopts a purposive approach to literature selection [14], which can lead to incomplete or misleading findings [21]. To make this approach more robust and to ensure a comprehensive coverage of literature, we thus followed guidelines for conducting systematic literature reviews to find and select relevant studies [22].

In Round 1, search queries containing variations of “value cocreation” and “KIBS” were carried out in major databases. In line with systematic review guidelines [22], these search queries were first tested in the ABI/Global database, to see if they retrieved articles known to be relevant by the researchers. Based on those results, additional, more general terms such as “business to business” were added to search queries to ensure that all potentially relevant studies were included. The search was then performed on four databases that allowed for combined searches of titles and abstract with these search queries: ABI/Global, Business Source Complete, Web of Science, and Scopus. This search yielded 472 results; 249 peer-reviewed journal articles remained after elimination of
duplicates and errors. An article from one of the authors of this paper was added to the set since the study reported was a key motivator for this research but the paper had not yet been officially published [6].

Inclusion and exclusion criteria were applied independently by two researchers to the titles and abstracts of articles. Differences were resolved by reading the full text of the article and applying the criteria jointly. A large number of articles were excluded from the analysis as they did not examine value cocreation in KIBS contexts. A total of eight articles were selected for the first round (see Table 1). Only studies reporting case-level data (detailing the evolution and outcomes of specific engagements) were selected for the first round. This approach enabled the determination of potential causality by allowing us to link the presence of specific components to positive value outcomes.

Round 2 involved the selection of sixteen additional articles. Twelve of these were found in the database searches, but were not included in the first round due to the absence of case-level data. Backward (looking at papers cited by each article) and forward (looking at articles that have cited selected articles) searches were conducted through the articles selected for Round 1 and Round 2, yielding four additional articles which included additional CIMO elements. A total of twenty-four articles were thus selected to develop the integrated framework shown in Figure 1.

The analysis and synthesis of selected studies followed guidelines for qualitative data analysis, including the development of a descriptive meta-matrix as a technique to manage data and support cross-case analysis [23]. Each article selected for the first round was hence analyzed by both researchers, who examined each case to identify CIMO elements and compile them in the meta-matrix. The two resulting matrices were then compared, and discrepancies were discussed and resolved. By analyzing each article in terms of its CIMO elements, results were made comparable beyond their varied contexts.

An initial integrated model was developed by synthesizing contextual elements, enablers / inhibitors, and causal processes across articles. To mitigate the subjectivity inherent in this type of analysis, researchers verified that the contextual elements, mechanisms, or processes reported by the authors of each article could indeed explain the outcomes of reported cases. In the second round, the set of sixteen articles was similarly analyzed through a descriptive matrix. Additional components were found in these articles that lead to refinements in the integrated model.

In order to identify which components of the integrated model were core to value cocreation in KIBS engagements, a technique drawn from qualitative comparative analysis (QCA) was used [24]. QCA uses Boolean logic to identify the components or sets of components that can be thought to cause observed outcomes across a range of cases. One of the techniques to do so entails the development of tables identifying the presence (1) or absence (0) of phenomena in a given number of cases, along with the presence (1) or absence (0) of a given outcome; these tables are at case-level, with each row identifying variables for one case. We thus revisited each case in each first-round article, noting if each CIMO element identified in the integrated framework was present or absent in that case. Assisted by the fs-QCA software developed specifically for this approach [25], we then analyzed the tables to identify necessary conditions for positive value outcomes through the consistency and coverage of each CIMO element. Consistency refers to the degree to which a condition is needed for the outcome to happen (calculated as # of cases displaying the component and positive outcomes / # of cases displaying the component), while coverage refers to the percentage of cases that can be explained by the causal condition (calculated as # cases with component and positive outcome / # of cases with positive outcomes) [24]. While in QCA a condition is deemed necessary if it shows >90% consistency and >50% coverage, we chose to include elements showing >80% consistency as well to account for the possible under-representation of data (i.e., a component might have been present in a case, but not necessarily reported in the article).

4. Overview of selected literature

Table 1 shows the articles selected for the first round of synthesis, and gives an overview of the cases they investigated. As this table shows, selected articles investigated value cocreation in varied KIBS contexts, including research and development (R&D), information technology development (IT), engineering services, and professional services. These articles were published in a variety of journals from the fields of marketing, IT, management, and service. Despite this variety, the majority of selected articles (6 out of 8) showed a similar conceptual foundation, citing seminal literature on value cocreation and service systems [8, 10, 26]. Table 1 also identifies the intensity of collaboration (as low or high – abbreviated in the table as L or H) and the presence or absence of value outcomes (as positive or negative – P or N) for each case. About half of the cases can be considered to be highly collaborative KIBS engagements; this element was shown to be an important differentiator among cases, as presented in the next section. In contrast, only
5 cases out of 14 present negative value outcomes; this therefore presents a bias in the selected literature.

### Table 1. Selected articles for first round

<table>
<thead>
<tr>
<th>#</th>
<th>Description of case(s) with intensity of collaboration (H/L) and value outcomes (P/N) in parentheses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Case 1: Academic R&amp;D – Development of virtual event (H/P)</td>
</tr>
<tr>
<td></td>
<td>Case 2: Academic R&amp;D – Development of curriculum for health care aides (L/P) [6]</td>
</tr>
<tr>
<td>2</td>
<td>Case 1: Outsourced IT service offering for call centers (L/N)</td>
</tr>
<tr>
<td></td>
<td>Case 2: R&amp;D project for software design (L/N)</td>
</tr>
<tr>
<td></td>
<td>Case 3: Software development project (H/P) [27]</td>
</tr>
<tr>
<td>3</td>
<td>Case 1: Development of a SOA platform for a watch manufacturer (H/P)</td>
</tr>
<tr>
<td></td>
<td>Case 2: Development of a SOA platform for a banking group (H/P) [11]</td>
</tr>
<tr>
<td>4</td>
<td>Case 1: Development of a performance dashboard for a university (L/N)</td>
</tr>
<tr>
<td></td>
<td>Case 2: Development of a performance dashboard for a government agency (H/P) [13]</td>
</tr>
<tr>
<td>5</td>
<td>Case 1: Coupler module development for industrial client (H/P)</td>
</tr>
<tr>
<td></td>
<td>Case 2: Compensator module development for industrial client (L/N) [28]</td>
</tr>
<tr>
<td>6</td>
<td>Pilot service offering by manufacturer of hydraulic drive systems to 3 clients (L/N) [29]</td>
</tr>
<tr>
<td>7</td>
<td>Professional service firm offering training and consultancy services to a technological service organization (L/P) [30]</td>
</tr>
<tr>
<td>8</td>
<td>Large system re-development and deployment between public service dept. (as provider) and their clients (L/P) [31]</td>
</tr>
</tbody>
</table>

The 16 articles selected for the second round of synthesis are briefly presented, but not detailed in a table due to space constraints. These 16 articles were as varied as the first set of articles, both in terms of types of KIBS and publication venue. Eight of these articles reported on case studies, but did not present data at the level of individual engagements [3, 32-37]. They nevertheless presented detailed data that allowed the identification of all CIMO components within one study; they thus had an important influence on the integrated framework presented in Figure 1. The findings of the other studies were derived from either qualitative interviews [38-40] or surveys [41-46]. Each study presented at least some CIMO components that were integrated in the synthesis.

### 5. Results

This section presents the results of our analysis of selected literature by describing the contextual variables, value cocreation enablers and processes, and value outcomes that were synthesized as an integrated framework (Figure 1). The components found to be key to positive value outcomes across studies are also presented.

#### 5.1 Contextual variables

We define contextual variables as factors present in the internal or external environment that can influence actors’ behaviour [14]. Within the innovation-focused literature on KIBS, a key contextual variable relates to the distinction made between traditional professional services such as management and legal services (P-KIBS), and technology-based services such as engineering and IT related services (T-KIBS) [2]. However, these categories were seldom explicitly referred to in selected literature. Moreover, while some articles focused on types of cases or contexts that could be categorized as either P-KIBS or T-KIBS [e.g., 27, 30], others drew from both [e.g., 32].

Another contextual element was emphasized in a number of studies, however: the **intensity of collaboration** among KIBS providers, clients, and other parties. Indeed, a joint mode of development was found to better support alignment of interests, coordination of decisions, and knowledge sharing in IT projects, thus to lead to business value [13]. Other studies found positive value outcomes to be associated with a higher degree of collaboration for innovation [28], a positive attitude toward cooperation [29], and longer-term provider-client relationships [45]. This contextual variable was a key focus in one of the studies, which described three possible modes of value cocreation in ERP partner alliances: the mode of synergy, where partners’ resources and competencies are integrated through collaboration; the mode of addition, where partners layer their IT services to generate separate revenue streams; and, the mode of exchange, where partners barter resources or competencies in exchange for something else, often revenue [35]. Different enablers and inhibitors were shown to influence each mode, and the mode of synergy was shown to produce the longest-term value for all involved.

Other contextual factors identified in the literature include: actors’ initial state in terms of, e.g., previous knowledge and existing networks [6]; the dynamic governance structures in which actors evolve [6]; customers’ existing technology repertoire [32]; quality of relationship initiation [32]; partner match, expertise,
and commitment [41]; research capacity [42]; level or
task creativity and client capabilities [39]; and,
relationship tenure [45]. Some of these factors, such as
partner match, were interpreted as enablers in the
integrated framework. Other factors were not
integrated in the framework as variables either because
they were not supported by other studies, or because
the way in which they impacted value cocreation was
not sufficiently clarified.

5.2 Enablers and inhibitors

We take enablers and inhibitors to be high-level
mechanisms that are causally relevant to observed
outcomes but act through low-level mechanisms such as
actors and their interactions [17]. A key enabler
identified across studies [3, 6, 13, 31, 32, 35, 41, 43]
concerns the development of relationships, trust, and
goodwill among engagement participants. This enabler
acts as a governance mechanism that is particularly
important in highly collaborative engagements [35]; it
supports alignment among actors [13] and generates
commitment [31]. Insufficient initiation and
management of relationships can, on the contrary, act
as an inhibitor of value cocreation in KIBS
engagements by interrupting resource exchanges
among actors [32]. A more tangible governance
mechanism, contractual agreements, also facilitates
value outcomes in KIBS engagements [35] by making
expected benefits and value propositions explicit [27].

The first enabler presented above, the development
of relationships, trust and goodwill, has been found to
mitigate status differences [31], which can inhibit
value cocreation in ERP alliances [35]. We use the
term status equality as the positive facet of status
differences; the latter were also shown to be mitigated
by a third enabler, participative coordination of
decisions [13]. Other enabling mechanisms that are
related to the human dimension of KIBS engagements are
the absence of conflicts of interest [35]; the ability
to reconcile values such as conflicting perceptions of
threats [29] through the management of value conflicts
[38]; and, partner match in terms of organizational
compatibility, prior business relations [41] and
collective capability [35].

Other enablers related to technology and resources
more generally. The opposite of relevant use of ICTs,
both detrimental practices of using ICTs and limited
ICTs, has been identified as an inhibitor of successful
resource exchange in professional KIBS engagements
[32]. The simplicity and adaptability of technology
in T-KIBS contexts such as ERP alliances [35],
academic R&D [6], and IT-based manufacturing
services [29] has similarly been found to support value
cocreation processes. Finally, the ability to access
complementary resources, whether related to IT

---

**Figure 1. Integrated framework of value cocreation enablers and mechanisms**

<table>
<thead>
<tr>
<th>Enablers (become inhibitors when absent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developing relationships, trust, goodwill</td>
</tr>
<tr>
<td>Contractual agreements</td>
</tr>
<tr>
<td>Access to complementary resources</td>
</tr>
<tr>
<td>Participative coordination of decisions</td>
</tr>
<tr>
<td>Status equality</td>
</tr>
<tr>
<td>No conflicts of interests</td>
</tr>
<tr>
<td>Reconciling values</td>
</tr>
<tr>
<td>Relevant use of ICTs</td>
</tr>
<tr>
<td>Partner match</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Processes of value cocreation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aligning within and between actors</td>
</tr>
<tr>
<td>Perceiving benefits</td>
</tr>
<tr>
<td>Creating value propositions</td>
</tr>
<tr>
<td>Organizing resources</td>
</tr>
<tr>
<td>Articulating deliverables</td>
</tr>
<tr>
<td>Sacrifices/benefits evaluation</td>
</tr>
<tr>
<td>Commitment</td>
</tr>
<tr>
<td>...</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Knowledge processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge sharing</td>
</tr>
<tr>
<td>Knowledge acquisition</td>
</tr>
<tr>
<td>Knowledge assimilation</td>
</tr>
<tr>
<td>Knowledge application</td>
</tr>
</tbody>
</table>

---

Legend: Core component across selected studies Additional core component for studies showing a high level of collaboration

5.3 Knowledge processes

Given their central role in KIBS engagements, knowledge-related enablers have been visually separated in Figure 1. While processes in their own right, they are taken to be enablers in our integrated framework because they support value cocreation processes rather than being directly responsible for creating intermediary and final value outcomes [36]. Indeed, interactive knowledge development is a core component of engagements among KIBS providers, clients, and other partners, as it enables innovation and organizational learning for all participating partners [33, 36, 44]. Knowledge development can be separated into three processes. Knowledge acquisition is the process by which a KIBS provider acquires domain knowledge from its client as well as complementary technical knowledge, in order to co-define the solution with its client [44]. Given that knowledge acquisition happens mostly at the beginning of an engagement, it can be understood to support aligning within and between actors. Knowledge assimilation is the process by which previous and new knowledge is combined and processed in order to solve the client’s problem in context [33]. This process is thus taken to support the actualizing of actors’ propositions. Knowledge application is the process by which each partner uses newly available knowledge to enhance its business [33, 44]; it encompasses both knowledge transfer and learning capability [35, 42]. This process then leads to the development of new or enhanced expertise, which in turn becomes a resource that fosters further service innovation [41]. Hence, knowledge application can be seen as an enabler for integrating deliverables and resources.

These processes require an adequate culture of knowledge sharing to be successful [33]. This enabler has been identified as a key supporting mechanism for value cocreation processes [6, 11, 13, 30, 31], whose absence can lead, for example, to service offerings that do not meet clients’ expectations [30]. Knowledge sharing can be challenging, however, because of the often tacit nature of knowledge in KIBS contexts [30], and the loose coupling among individuals and groups that is typical of professional service firms [34].

5.4 Processes of value cocreation

We take processes of value cocreation to be causal processes enacted through actors, their activities, and their interactions [17, 18]. While the enablers and knowledge processes described above support – or hinder - these processes, it is the interrelated working of the components of value cocreation processes that produce the intermediary and final outcomes of KIBS engagements [17]. Three main processes have been identified in the selected literature, which we have named Aligning, Actualizing, and Integrating.

Aligning is the process by which actors negotiate their offerings and potential value-in-use [38] (thus aligning between actors), and ensure that they are both willing and able to commit the resources required to fulfill these offerings (thus aligning within actors) [6]. The success of this process – the authorization to proceed [27] or commitment [6] - thus requires that benefits outweigh the sacrifices perceived by each actor in terms of costs and risks [6, 38].

Five components of aligning have been identified in the selected studies. The first one, developing high-level interests, relates to actors’ concerns and motivations beyond the engagement, and drives actors’ desire to collaborate [6]. Social interactions among actors are needed to align these and arrive at mutual interests [13]. Perceiving benefits relates to the expected benefits that each actor hopes to gain from the engagement; they are perceived from others’ value propositions, in line with one’s high-level interests [6]. Creating value propositions is then the component by which actors adapt their offerings to others’ needs and goals [6, 38]. Perceived benefits and value propositions need to be clearly and explicitly stated among actors in order to be aligned [27, 29]. A stated value proposition necessarily implies the ability to organize the resources needed to fulfill it [6]. Required resources may include existing knowledge and skills, facilities, information, material, time, financial resources, and more [38]. Articulating deliverables refers to defining the project [39] and designing the solution [38]. Deliverables of an engagement differ from value propositions in that no one actor can generate them on their own [6].

Once actors have committed to a KIBS engagement, they go on to perform the activities and interactions that they have agreed to in order to generate the solution [39], thus to actualize the service [27]. A major component of this process is the co-production of stated deliverables, for which the level of client participation can vary widely from, for example, solely providing domain information to fully collaborating in producing the solution [3, 38, 39]. The resources required to actually co-produce the solution may be different than planned; actors then need to continue organizing resources as they co-produce and problem-solve [38]. Doing so might lead to the emergence of a feedback loop with aligning. For example, underestimating the time needed to interact with other actors can lead to the re-evaluation of the
cost vs. benefit of an engagement, and even to pulling out from the engagement [27]. Implementing the solution has also been identified as a component of actualizing, and includes applying and testing the solution [11, 38, 39]. While implementation can result from joint efforts by all participating actors [11], the level of client participation can also vary [39]. The intermediate outcome of the actualizing process is the actualization of value propositions, in the form of deliverables and process results such as improved relationships and learning [6, 31].

In order for value to be cocreated in a KIBS engagement, it is not sufficient for solutions and new knowledge to be generated; they must be also be adequately used, or integrated [6, 11, 31]. This involves first valuing deliverables and process results [6] to acknowledge that the expected value defined during the aligning process has been fulfilled [27]. If positive, this first valuation step leads to integrating deliverables and process results as new resources, which requires organizing complementary resources and competencies as well [11]. The value-in-use of these resources, or valuing of outcomes, is then a separate and ultimate measure of value [6, 38]. Value outcomes of a KIBS engagement are then not limited to measures such as service-level agreements, but results from these varied dimensions of valuing [6].

5.5 Value outcomes

Selected articles show a variety of value outcomes generated by KIBS engagements. They can be categorized as [38]: direct financial value such as increased revenue [11, 13, 27]; indirect financial value such as increased rent-earning capacity [35], innovations [41, 44], and sustainable competitive advantage [3]; or, non-monetary value such as organizational learning [46]. These categories feed into each other, since non-monetary value such as knowledge, competencies, and reputation can support business development, which can then lead to financial benefits [28]. Some studies focus solely on the direct financial value accrued by the client [11, 13, 27] or the provider [28, 43], while others report on mutually beneficial outcomes [31] or varied levels of outcomes for each participating actor [6]. Moreover, value outcomes can be achieved immediately after the engagement, or may be reaped in the long-run, after the solution has been used [38].

The intensity of the collaboration has been shown to impact the type of and duration of value outcomes; for example, a synergistic collaboration among KIBS partners can lead to increased rent-generating capacity in the long run, beyond the engagement, while the rent-generative capacity emerging from an additive mode of collaboration may not be transferable beyond the engagement [35]. Finally, actors’ perceived value from the engagement impacts their willingness to collaborate in the future [28], which in itself is a source of value [42].

5.6 Core components of the framework

As described in section 3, the consistency and coverage of each component was calculated across the 14 cases reported in the 8 articles selected for the first round in order to identify the core components of the framework. Calculation was limited to those studies because they were the only ones reporting on case-level outcomes, which is a requirement when trying to identify necessary conditions [24]. These results do not necessarily indicate that other components do not play a role in value outcomes, but that they may be situation-specific.

Given this approach, the contextual factor “Intensity of collaboration” did not stand out as a necessary condition for positive value outcomes; indeed three cases were deemed to have a low intensity of collaboration while still yielding positive value outcomes (see Table 1). However, as discussed below, this factor did have an important impact on which components were found to be core across cases; in short, some components were found to be core only to cases displaying a high intensity of collaboration.

Eight enablers were however found to be key to positive value outcomes. These include all of the knowledge processes, as well as 4 other enablers (see enablers that have been bolded and highlighted by a grey background in Figure 1). A fifth enabler, participative coordination of decisions, also stands as a core component when only cases with a high intensity of collaboration are taken into account (components only found to be core to high intensity collaborative engagements are indicated by a grey background in Figure 1, without letters being bolded). While the generalizability of these results is limited, they highlight the importance of knowledge processes for positive value outcomes in KIBS engagements; indeed, all cases yielding positive outcomes displayed every knowledge process, except for case 1 of article 7, which did not report the presence of knowledge sharing.

Five components of value cocreation processes were also identified as core to positive value cocreation outcomes across reported cases. Within the aligning process, perceiving benefits and creating value propositions were present in nearly all cases. While high-level interests were not found to be a necessary condition of positive outcomes across all cases, they did meet the criteria for consistency and coverage.
within cases showing a high intensity of collaboration; it may thus be the case that this component is core to positive value outcomes in highly collaborative KIBS engagements.

Within the actualizing process, organizing resources and implementing the solution were identified as necessary conditions for positive outcomes. However, the involvement of the client in co-producing deliverables was identified as a core component of cases with a high intensity of collaboration. These results support the proposition that coproduction is optional to value cocreation [10], but indicate that this may only be true for KIBS engagements that are not highly collaborative. Within the integrating process, the only component found to be consistent with positive outcomes was the valuing of deliverables and process results. Valuing deliverables was also found to be a necessary condition for actors’ willingness to collaborate in future engagements. Again, results differ however for cases with a high intensity of collaboration; in these cases, organizing deliverables and process results as new resources, and valuing the outcomes of doing so, were also present in nearly all cases with positive outcomes.

6. Discussion

The integrated framework developed from extant literature on KIBS engagements shows both similarities and specificities in regards to value cocreation processes and mechanisms in other types of service systems. For example, it has been found that value cocreation occurs during three phases in (non knowledge-intensive) business-to-business (B2B) relationships: the joint crafting of value propositions, value actualization, and value determination [47]. These three phases roughly correspond to the three processes of value cocreation presented in this article. However, the knowledge processes that accompany value cocreation processes in our framework are absent from the stated B2B phases. Another study analyzing 1 articles devoted to value cocreation in a wide array of service contexts identified “co-production” and “value-in-use” as the two main components of value cocreation [48]. These components, which are respectively present in our “Actualizing” and “Integrating” processes, thus suggest that the “Aligning” process and its accompanying components may be specific to B2B service contexts.

The identification of the framework’s core components confirms the influence of the degree of collaboration on the enablers and processes that are needed for positive value outcomes to emerge, and on the type of value that is created [13, 28, 29, 35, 45]. Indeed, all of the cases that could be categorized as displaying a high intensity of collaboration yielded indirect financial and non-monetary value, while indirect value was seldom present in the other cases. Thus, while KIBS engagements in which parties align their interests and co-produce deliverables may be more demanding, they may lead to more varied types of value outcomes.

Understanding which components are core to value cocreation in specific contexts can be useful to KIBS providers when establishing a new engagement. For example, a consultant preparing to embark on a new project with a client could use the framework to guide initial discussions about: the projected intensity of collaboration; the impact of that collaboration on the decision-making structure; the client’s main concerns and goals beyond the project, if relevant; how involved the client expects to be in producing deliverables; how newly gained knowledge could best be applied within the client organization, etc. Such a discussion could foster transparency and help to ensure that each party’s expectations are explicit. This would further support key enablers such as developing trust and reconciling values, hence increasing the chances of success for the project.

7. Conclusion

This article presents an integrated framework of value cocreation enablers and processes in KIBS engagements. The framework was developed by synthesizing the results of 24 empirical studies investigating varied dimensions of value cocreation in KIBS engagements. The necessary presence of each component for positive value outcomes to occur was evaluated, showing the importance of knowledge processes across the selected set of studies. Additional enablers and processes were identified for highly collaborative KIBS engagements.

This research contributes to the field of service science by providing a detailed yet integrated understanding of how value cocreation unfolds in the context of KIBS engagements. While the studies that have been brought together in this current research each provide relevant insights on this phenomenon, synthesizing their results has allowed us to combine these insights into a framework that has greater generalizability across KIBS engagements. Moreover, this research helps to bridge two separate strands of literature: innovation-related literature on KIBS as actors that contribute to their economies’ innovation systems through knowledge processes [2, 44], and service science literature discussing how value cocreation can lead to service innovation in KIBS engagements [29, 41]. The integrated framework proposed in this research explains how knowledge and
value cocreation processes are related; as such, it provides a conceptual basis that may help to improve how we design KIBS engagements in a way that fosters innovation.

While this study makes key contributions to our understanding of value cocreation in KIBS engagements, certain limitations were inherent in our analysis. Though our research synthesis attempted to be objective, specific assumptions and decisions were made, for example, to adopt an actor-to-actor perspective when developing the framework [49]. As a result of this decision, we did not distinguish between client and provider roles and processes as did some of the selected studies [31, 38]. Validating the framework through further empirical research would mitigate these limitations by providing evidence to support or revise these assumptions and decisions. Validating the applicability of the integrated framework in high- and low-intensity collaborative contexts would also improve the generalizability of the results.

Despite these limitations, the integrated framework can be a useful tool for guiding the design of KIBS engagements. For example, a KIBS provider contemplating a new engagement could use the framework as checklist of elements and activities that should ideally be present to improve value outcomes, or as a basis for discussion with its client. To increase its practical application, the framework could also be stated in the form of design propositions [14]; for example, “in highly collaborative engagements (context), ensure that participants are aware of and align their high-level interests (mechanism) to increase the type and level of perceived value (outcome)”.

A further contribution of this research relates to the method of research synthesis. Indeed, the research community undertaking empirical research on service systems is active and growing; while this situation is beneficial for the field, it can also lead to the dispersion of important contributions across varied publication venues. Integrating the results of studies focusing on the same dimension or context can address the fragmentation of results and increase their applicability [14]. As such, conducting research syntheses could contribute to the evolution of our common knowledge base on service systems.

8. References