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Managing value in use in business markets

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ABSTRACT

Suppliers in business markets are increasingly providing complex offerings, which is reflected in concepts like hybrid offerings, servitization and solution business. Such complex offerings are characterized by value propositions in which the value that emerges throughout the entire customer usage cycle builds the core element. To secure and increase this value in use, as perceived by the customers, suppliers need to establish activities of value-in-use management. This value-in-use management comprises monitoring the delivery of the promised value, and enhancing customer value in use throughout the entire lifecycle of a complex offering. This article investigates which value-in-use management activities are currently implemented by suppliers, how these activities are linked to other business processes, and what differences in value-in-use management activities exist between various types of complex offerings. By addressing these questions, this research contributes to literature by exploring post-deployment processes that affect value in use customer experience when using complex offerings. Moreover, from a managerial perspective, it reveals in which constellations measures of value-in-use management are currently implemented in practice and therefore are of particular importance. Furthermore, the results of the study may serve as a starting point to elucidate how measures of value-in-use management can be implemented successfully.

1. Introduction

Suppliers in business-to-business (B2B) markets are increasingly offering complex products and services as well as bundles of these. This development is reflected in concepts like hybrid offerings (e.g., Ulaga & Reinartz, 2011), servitization (e.g. Raddats, Kowalkowski, Benedettini, Burton, & Gebauer, 2019), and solution business (e.g., Tuli, Kohli, & Bharadwaj, 2007). While hybrid offerings are customized combinations of products and services (Ulaga & Reinartz, 2011), servitization describes the respective procedure of adding services to product offerings in order to create superior customer value (Raddats, Kowalkowski, Benedettini, Burton, & Gebauer, 2019). Solutions, lastly, are characterized by "end-to-end offers around customer activities and/or processes" through which "solutions providers take on the responsibility to achieve specific outcomes defined by the customer" (Worm, Bharadwaj, Ulaga, & Reinartz, 2017, p. 491). Solutions thus comprise customer-supplier relational processes and are more than the sum of their product and service components (Tuli et al., 2007).

The challenge with complex offerings is that they result in modified value propositions in which not certain attributes of products and/or services, but rather the value that should be provided to the customer firm builds the core element (Terho, Haas, Eggert, & Ulaga, 2012). There is widespread understanding that value is the main driver of marketing and purchasing decisions in B2B settings (e.g., Eggert, Kleinaltenkamp, & Kashyap, 2019). Hence, providing superior customer value is key for suppliers to build long-term business relationships and to stay competitive (Terho et al., 2012; Woodruff, 1997). However, value is not provided at the moment when customers and suppliers agree on the specifications, terms, and conditions of the delivery, it is rather cocreated throughout the customers' usage processes (Macdonald, Wilson, Martinez, & Toossi, 2011) in which both customers and providers deploy, combine and exchange resources in collaborative activities (Friend, Malshe, & Fisher, 2020; Prahalad & Ramaswamy, 2000; Ranjan & Read, 2016; Vargo & Lusch, 2016). Therefore, experienced value in use (VIU) defined as "all perceived consequences arising from resource integration … that facilitate or hinder achievement of the actor's goals" (Eggert et al., 2019, derived from Macdonald, Kleinaltenkamp, & Wilson, 2016, p. 98) becomes the central concept providers should focus on in this regard. This VIU, as perceived by the customer, is especially important because of its impact on relational outcomes like customer satisfaction and trust (Bruns & Jacob, 2016; Lemke, Clark, & Wilson, 2011) and as a result on customer's rebuy decisions. However, as experienced VIU is a dynamic rather than a static phenomenon, suppliers need to respond to the changing

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assessments and evolving requirements of their customers that take place especially during the often long-term usage of complex offerings.

Moreover, as the complexity of offers increases, so does the financial and operational risk for the provider (Kowalkowski, Windahl, Kindström, & Gebauer, 2015). The more the providers are involved in customers' value-adding processes, the more they also take over the risk of achieving the contractually agreed-on outcomes (Ulaga & Reinartz, 2011). And as customers themselves through their resources and activities contribute to the experienced VIU in the course of the joint resource integration processes that characterize complex offerings (Macdonald et al., 2016), providers can only partially control the resulting outcomes. Thus, a risk emerges of being held responsible for not reaching value promises for which the providers are not or only partially responsible. From a supplier's perspective, the redefinition of firm boundaries that goes along with selling and providing complex offerings thus also raises the need for risk mitigation measures (Kowalkowski et al., 2015).

Consequently, both to ensure or even increase the value promised to the customer as well as coping the risks related to providing complex offerings, suppliers need not only to focus on selling such offerings but also and maybe even more, on the subsequent delivery and post-deployment activities. For this purpose, it becomes necessary to pursue accompanying activities of monitoring and enhancing customer perceived VIU throughout the entire collaboration with a customer firm. These activities aim, first, at verifying that the promised value has been delivered (Storbacka, 2011), and second, at searching for opportunities to enhance the quality of the collaboration (Macdonald et al., 2016). We refer to the entirety of such measures of monitoring and enhancing value as *value-in-use management* (VIU management).

While there is already extant knowledge on buying decisions, and buying processes in B2B settings (e.g., Webster & Wind, 1972), the subsequent usage processes and their impact on relational outcomes as well as customer rebuy decisions are less explored (Eggert et al., 2019; Kleinaltenkamp, Plewa, Gudergan, Karpen, & Chen, 2017). This is especially surprising, not only because Woodruff (1997) already emphasized that organizations should track the created value for the customer, but also because measures of VIU management have already been highlighted as being critical for quality assessment and value creation (Macdonald et al., 2011; Macdonald et al., 2016). To overcome this research gap, this study follows a theories-in-use approach (Zeithaml et al., 2020) and investigates, based on qualitative interviews with firms representatives of a variety of industries, the status quo of VIU management in practice from a supplier's perspective thus focusing on the following research questions:

RQ1. What are VIU management activities currently implemented by suppliers of complex offerings in business markets?

RQ2. How are VIU management activities interlinked with other business processes?

RQ3. What are differences in VIU management activities between different types of complex offerings?

The remainder of the paper is structured as follows: First, a review of the literature on VIU management is conducted to characterize the research gap more precisely. Second, the method section will provide details on the design and execution of the study. The following section presents the findings of the study, while the concluding chapter discusses the findings, offers implications for theory and practice, and proposes avenues for future research.

The findings from this study contribute to extant literature on hybrid offerings, servitization and solution business as well as to literature related to VIU in business markets. First, by conceptualizing and characterizing the VIU management process and demonstrating its influence on customers' value experiences and perceptions it sheds light on a so far underinvestigated sub-process of complex offerings as it has been developed in the processual view of solutions (Macdonald et al., 2016; Tuli et al., 2007). Second, given the dynamic character of experienced VIU (e.g., Eggert et al., 2019), we show that this value not only simply develops over time. It rather can be actively influenced and increased by planned and structured provider activities resulting in positive outcomes for both sides. Third, by identifying the links between the sales phase and the postdeployment phase our study not only elucidates the necessity of interrelating the research streams of value quantification and communication (e.g., Terho et al., 2012; Töytäri & Rajala, 2015) on the one hand and VIU management on the other. Our results also provide initial indications of how this link can be established. Fourth, with respect to the typology of hybrid offerings that has been developed by Ulaga and Reinartz (2011), our results show that the necessity and the usefulness of operating VIU management differs with respect to the four identified types of complex offerings.

From a practical perspective, the results of this study help firms to determine in which constellations VIU management is especially important and how it can be implemented successfully. The identified measures thus also help to overcome challenges of value cocreation in general that relate to the effective participation of the business partners within resource integration as well as their involvement, engagement and mutuality (Bharti, Agrawal, & Sharma, 2015; Malshe & Friend, 2018). Furthermore, the results pay heed to the necessity of coordinating the interface between sales and account management. This essentially refers to the point that sales people should only make promises to their customers with regard to such value dimensions that can be identified and reported as part of a subsequent VIU management process.

2. Value-in-use management

Research focusing on customer usage processes in business markets is sparse (e.g., Storbacka, 2011; Tuli et al., 2007). This is surprising, as previous research has identified this phase as being critical for the quality of complex offerings and their success (Tuli et al., 2007). In contrast, value-related research in business markets largely focusses on value propositions and value selling (e.g., Eggert et al., 2019; Terho et al., 2012; Töytäri & Rajala, 2015). The reason for this is that developing value propositions, mirroring them according to the customer's specific situation and communicating the respective value to the representatives of a customer firm, causes great challenges for suppliers (Töytäri & Rajala, 2015). Here, research shows that in the meantime, suppliers have developed a number of different methods to quantify and communicate the potential value during the sales process. These methods include, for instance, return-on-investment studies that aim at building evidence of the offering's potential monetary implications for the customer firm. Furthermore, methods such as communicating reference or use cases to demonstrate past success or guaranteeing agreements to assure the achievement of certain outcomes are widely spread among suppliers to reduce customers' perceived risk (Terho et al., 2012). Although ex-ante value promises and value quantifications may raise the need for ex-post value verification (Hinterhuber, 2017; Storbacka, 2011), value propositions can ‘only’ prepare the ground for entering into the value-creating relationships. To establish and ensure such relationships, further VIU management that comprises measures of VIU monitoring as well as VIU enhancement is necessary. Table A1 of the Appendix provides an overview of the literature that has explicitly or implicitly addressed VIU management in a B2B context so far and whose findings are explained in more detail in the following paragraphs.

Value-in-use monitoring is defined as “all supplier activities of identifying and reporting the value in use” (Macdonald et al., 2016, p. 107). This understanding is close to the concept of value verification introduced by Storbacka (2011). He identifies different supplier capabilities and practices necessary to verify and report that the planned value has been created and to document successful value provision. Similar to Macdonald et al. (2016), Storbacka (2011) describes these

activities as taking place during the customer's usage processes, aiming at securing value creation for the customer and capturing value for the supplier. The identified capabilities and practices include the specification of promises made during the sales process and the definition of systematic internal contract hand-over processes from sales to operations to ensure accurate input and a quick ramp-up of the project. Also Töytäri, Alejandro, Parvinen, Ollila, and Rosendahl (2011) emphasize that suppliers need to verify the created post-purchase value and track customer satisfaction in order to show commitment. As an adequate verification method, Storbacka and Nenonen (2009) suggest that value creation can be indicated by the discounted present value of all the future economic profit that the relationship creates. However, it remains unclear whether this method is actually used by suppliers in practice to regularly indicate the created value. Therefore, research is needed to learn more about the methods and indicators that suppliers use for value verification.

The same holds for those activities that are conducted to report such information to the customer (Storbacka, 2011). Macdonald et al. (2011) show the urgency of suppliers' reporting activities by revealing their influence on the VIU as assessed by the customer. However, VIU monitoring does not only focus on demonstrating that the promised value has been delivered and thereby enabling suppliers to take corrective actions if delivery is at risk (Storbacka, 2011). Macdonald et al. (2016) add that it also includes the detection of unanticipated innovation potential or competitive advantages as a basis for further VIU enhancement.

Value-in-use enhancement is defined as “all supplier activities of reflecting on and disseminating opportunities for value-in-use enhancement” (Macdonald et al., 2016, p. 107). VIU enhancement measures thus imply suppliers' continuous efforts to find new ways to increase customer value even though this may not be part of the original contractual agreements. Such measures reflect potential changes to the business environment, customers' requirements, their goals and, therefore, their desired value over time, which means that customers' quality assessments during their usage process may change, too (Macdonald et al., 2011). First, suppliers need to recognize, track and understand these changes (Beverland & Lockshin, 2003; Flint, Woodruff, & Gardial, 2002). Second, suppliers need to secure value over time and strive to identify opportunities to influence customers' evaluations of the business relationship (Gassenheimer, Houston, & Davis, 1998). Continuous interaction with the customer and monitoring efforts are thus necessary to enable suppliers to detect and actively influence those changes and exploit new value-generating opportunities (Flint et al., 2002; Woodruff, 1997). Moreover, to achieve the customers' evolving goals, suppliers need to proactively adapt their actions over time (Beverland & Lockshin, 2003; Macdonald et al., 2016). This requires a deep understanding of the customers' business needs, which is especially important since customers are not always able to articulate their problems and needs very clearly (Nordin & Kowalkowski, 2010; Woodruff, 1997). Bonney and Williams (2009) agree that suppliers need to respond appropriately to these customer dynamics. At the same time the authors stress that this should be done in a way that is profitable for the supplier company. Further, to the best of our knowledge, only a few studies identify concrete measures that can be categorized as suppliers' VIU enhancement efforts. Helander and Möller (2008), as an exception, define activities through which large system suppliers in the telecommunications industry achieved the expansion from their original business model towards solution business. Those activities, which the authors refer to as long-term “customer care” (p. 721), can be divided into four customer-supplier activity sets: warranty services, support and maintenance services, system extensions, and consulting and optimization services. Also, Macdonald et al. (2011) mention warranty and repair services as parts of solution delivery and influencing factors on the customer's perceived solution quality. Tuli et al. (2007) even go beyond this and emphasize that postdeployment support in solution business is more than spare part delivery and maintenance service and also includes the development of new products.

Hence, although recent research highlights the importance of suppliers' continuous VIU management measures, their implementation often remains unclear or industry-specific as in the study of Helander and Möller (2008). There is thus a necessity to expand the knowledge already gained in this field to identify and develop further activities of VIU management. Consequently, as a first step, this study aims at examining the procedures suppliers pursue in this regard in diverse practical contexts.

3. Method

Since VIU management is a phenomenon that has appeared in literature only recently and that is largely unexplored so far (Macdonald et al., 2016), the present study applies a theories-in-use approach that is especially well suited to define marketing constructs that appear in practical contexts and that is trying to elicit “theories held by individuals with proximity to the problem” (Zeithaml et al., 2020, p. 34). Also following such a theories-in-use approach, Macdonald et al. (2016) already identified VIU management as a process within solution business that affects customers' value-in-use appraisals. However, the authors did not investigate the respective activities in further detail. Consequently, to identify VIU management measures that are currently implemented by providers of complex offerings in business markets and to investigate how they relate to each other and to other relevant business processes from the perspective of practitioners active in this field, we conducted semi-structured in-depth interviews (Qu & Dumay, 2011) with employees of provider firms.

The goal for the sampling procedure was to maximize diversity in order to capture central themes and detect varieties (Patton, 1990) of VIU management processes across various contexts. The sample size was determined by the concept of saturation (Mason, 2010). In total, 21 interviews were conducted with employees of 20 different supplier firms. The interviewees represented supplier companies operating in different sectors, including industrial manufacturing and consulting. The functions and hierarchical levels represented by the participants were also diverse, including key account managers and managing directors. All participants were key informants with direct customer contact and positions with responsibility for the companies' customer relationships. On average, the participants had 12 years of professional experience. The companies ranged from small start-ups with only nine employees to large and well-established companies with more than 400,000 employees. Although the aim was to develop a diverse sample, the companies needed to be comparable. Therefore, all companies were suppliers, selling complex offerings in B2B settings. Furthermore, according to their official company websites, the companies in the sample declared to offer solutions for their customers. For key characteristics of the sample see Table 1.

Interviews were conducted in Germany between March 2018 and November 2018 and carried out via telephone or face-to-face. To make sure that certain topics were covered, we used a guideline consisting of 20 open-ended questions. However, the interview guideline was still flexible and allowed the interviewer to adapt the conversational style and questions to the situational context and the interviewee. This method was thus capable of exploring the research topic and disclose unanticipated facets (Patton, 1990; Qu & Dumay, 2011). To get into the topic and understand the supplier's business, the first questions in the interview guideline related to the company's specific offerings and the potential customer value. The main part consisted of questions about their general interaction with the customer during the usage phase, in particular their VIU monitoring and VIU enhancement efforts. In the end, the interviewees were openly asked whether they would like to add anything else. Overall, the interviews took 841 min and lasted 40 min on average. Furthermore, they were audiotaped and transcribed verbatim. To facilitate the data coding and analysis, f4/f5 software was used.

Table 1
Key characteristics of the sample.

Company	Position of interviewee	Work experience (in years)	Industry
Alpha	Key Account Manager	5	Provider of language trainings
Beta	Sales & Project Manager	4,5	Provider of airline catering and inflight services
Gamma	Head of Sales DACH & Western Europe	1,5	Machine manufacturer
Delta	Director Marketing and Sales	32	Provider of measurement and testing technology
Epsilon	Project Leader	6	Industrial manufacturer
Zeta	Global Head of Solution Business	28	Provider of drive technology
Eta	Managing Director	29	Provider of drive technology
Theta	Business Unit Manager	30	Provider of sensor technology
Iota	Division Manager & Member of the Executive Board	20	
	Project Manager	2	Service provider of CRM-solutions
Kappa	Tech Architecture Delivery Analyst	1,5	Consulting company
Lambda	Partner	12	Consulting company
My	Senior Consultant	2,5	Consulting company
Ny	Head of Business Development	3	Software provider
Xi	Customer Success Manager	10	Software provider
Omikron	Chief Operating Officer	20	Software as a service provider
Pi	Managing Director	20	Software provider
Rho	Project Manager	2,5	Advertising agency
Sigma	Media Consultant	2,5	Media agency
Tau	Head of Customer Service	16	Provider of cash free service en route
Ypsilon	Human Resource and Customer Service Manager	1	Personnel service provider

The data analysis followed Gioia, Corley, and Hamilton (2012). First order categories were detected by identifying patterns that were recurring and recognizable across different cases (Eisenhardt & Graebner, 2007). Since first-order concepts should be narrow, little attempt was made to merge categories, and wording was close to interviewee terms. Those categories were then bundled to more abstract second-order themes, using existing theory. Thereby, VIU management measures were identified. After saturation was reached, the second order themes were grouped again, resulting in aggregated dimensions (Gioia et al., 2012). This procedure revealed the sub-processes of VIU management. Determining the stability and quality of the obtained data, an intercoder reliability test was conducted. Seven independent judges were asked to allocate quotes from the interviews to the identified constructs. This procedure resulted in a proportional reduction in loss reliability measure of 0.96 (Rust & Cooil, 1994), which is above the more stringent standard of 0.90 suggested by Nunnally (1978).

4. Findings

In this section, we present the findings of our study. Besides the activities that we identified with respect to VIU monitoring (4.1) and VIU enhancement (4.2), we found a so far unexplored link between VIU management and other business processes, mainly those taking place during the sales phase (4.3). Furthermore, we revealed that suppliers' effort with respect to VIU management activities differ (4.4) and found out that the diversity can at least partly be explained by the different challenges that are associated with various types of complex offerings (4.5).

4.1. Value-in-use monitoring

4.1.1. Value-in-use identification

The data analysis revealed several measures of VIU monitoring focussing on VIU identification on the one hand and VIU reporting on the other hand (Macdonald et al., 2016). *VIU identification* is defined as all supplier activities of measuring indicators that aim at reflecting the created value and that are meant to be reported to the customer during the delivery phase. Three different types of indicators emerged from the data (see Table 2). These indicators differ in their informative value. Some of the interviewees explained to measure indicators that reflect the actual economic value of their offering for the customer firm, e.g. an increase in sales or cost savings. However, others rather indicate a performance outcome that has an economic impact on the customer firm but does not explicitly reflect it. This might be, for instance, continuous monitoring of machine performance, as machine breakdowns typically have negative effects like additional repair costs or lost sales. To prevent such negative economic outcomes, continuous monitoring of the machine performance and proactive intervention by the supplier are necessary as the comment of the global head of solutions at Zeta illustrates: “What we have today is a service contract. […] This means that I can permanently monitor all my process data. With this monitored process data, you can in principle detect deviations, anomalies. You can then draw conclusions about that point in time a certain product might fail.”

Furthermore, some suppliers measure indicators that reflect performance with an indirect effect on the created economic value for the customer, e.G. media KPIs as ad impressions. A media consultant at Sigma put it this way: “Yes, there are media KPI's, like click rates and impressions. […] So, there are certain media KPI's that you can clearly define [while the campaign is running]. […] But then there are downstream KPI's [i.e. sales], which are difficult to understand.” The interviewee further explained that it is still difficult to prove a link between a sale and the broadcast of a digital advertisement. It can be assumed that an increase in clicks on product advertisement might influence the economic value of the customer firm by increasing sales for the respective product. However, a direct effect cannot always be proven, especially considering that sales can take place online and offline.

In fact, the indicators provide information on the achievement of customer goals at different hierarchical levels. Imagining goals in a hierarchical structure implies that the achievement of lower-level goals helps to accomplish superior goals (Bandura, 1988; Beach, 1990; Bettman, 1979; Gutman & Reynolds, 1978). Assuming that the ultimate goal of the supplier's offering is to improve the competitiveness of the customer firm by increasing its economic effectiveness and/or efficiency. This goal might be achieved through various sub-goals, for instance, a constant machine performance over time in a manufacturing company or an increase in ad impressions in an e-commerce company. While some suppliers in the sample actually measure the accomplishment of the created economic effects for the customer as the ultimate

Table 2
Value-in-use monitoring.

First-order concepts	Illustrative quotes	Second-order theme	Aggregated dimension
- Measuring monetary savings for the customer (output KPI) - Measuring monetary gains for the customer (output KPI) - Measuring an increase in the customer's efficiency (process KPI) - Monitoring and test of machine performance (outcome KPI) - Predictive maintenance (leading KPI) - Measuring operational efficiency (process KPI) - Measuring operational benefits (outcome KPI) - Measuring end customer's opinion about supplier operations (qualitative KPI)	"For our big customers we make presentations, where it is simply shown, because you have now always refuelled at this gas station, […] you saved so many hundreds of thousands of euros. "(Tau) "So, the main indicator for an onboard retail program is the SPP [spend per passenger]." (Beta) "So, to send surveys to employees to ask, for example, since the English training, I save about an hour a week of working time because of more efficient learning. "(Alpha) "Then they'll do a huge test and then they'll look, here dear customer, watch out, you're now driving on 263 MegaWatt […]. "(Epsilon) "Then, of course, there's the topic of predictive maintenance, where we define algorithms, that are used as a basis and will be compared with the data that we permanently collect […]. "(Zeta) "So, either a purely quantitative reporting, how many calls were received yesterday, what was the average speed of answer […]. "(Iota) "We count, for example, how many improvement measures we find […]. "(My) "So, customer calls, speaks with you, [..] afterwards he gets an *E*-Mail, where he is asked to assess the contact. "(Iota)	Key value indicator (economic value) Indicators with direct effect on economic value Indicators with indirect effect on economic value	Value-in-use identification
- Formal customer satisfaction surveys - Informal check of customer satisfaction - Rating scale to evaluate customer service - Analyzing how customers currently use the solution - Analyzing number of support requests - Customer contacts support or sales force for complaints - Customer contacts higher management for complaints - Customer contacts dustributors or subsidiaries for complaints	"Typically every three years, we do customer satisfaction surveys under various headings […]. "(Delta) "[…] Well, I would say we are already very aware of this in our company that the customer must be satisfied. It is driven a lot by this topic 'voice of the customer' […]. You're constantly urged to ask the customer about his aches and pains." (Epsilon) „Where the customer can say, yes or no, you could help me and then there's a rating scale, how satisfied were you, so in principle, did it take a long time or was the problem solved quickly or was the problem solved at all. "(Xi) "We have an Excel spreadsheet and there are about 35 metrics we're investigating. Which describe the customer behavior. "(Omikron) "So, we don't do it enough, but we do occasionally for example look at which customers had no support calls at all, yes. […] So, too many support calls is bad, no support calls is also bad, yes. "(Pi) "The customer who has a problem calls the account manager and says, come on, help me, explain it to me. "(Delta) "No, it's like that, I don't think it's the managing director, but it's usually the case that the client service director is called by the customer who complains that it's not going well, so to speak. "(Rho) "[..] usually, customers go to the distributor where they bought it [the machine] and either they can help them or they would contact us. "(Gamma)	Measuring customer satisfaction Analyzing customer behavior Receiving customer complaints	Indirect value-in-use identification
- Supplier works at the customer's premises for the duration of the collaboration - Daily exchange with the customer via telephone or email - Weekly meeting in the customer's office - Weekly call with the customer - Exchange with the customer to discuss future orientation of the collaboration - Meetings to review the output of the collaboration	"With onboard retail, when we take over the program completely, most of us have a few people sitting directly with the airline, who then control it [the program] from there and interact with the airline's individual functions and areas of business on a daily basis. "(Beta) "So, now you have daily, hourly actually, contact to the customer. So, now with this customer, so there it really goes [back and forth], whether by telephone or by mail […]. "(Rho) "I know, for example, that with this customer we have a meeting once a week, so they are located in Hamburg, a so-called status meeting, where the agency participates. "(Rho) "I have two routine calls with this customer every week. One that's specific to this ramp, one that's more operational. "(Iota) "I was only yesterday personally at one of these key customer's premises for a let's say quarterly meeting. […] To make a comparison, where is the business relationship moving, where do we have to strive for corrections, how do market issues and demands on the product or on the cooperation change. "(Eta) "So, most of the strategic review meetings are not once a week, but rather once a month or every two weeks. Once a month then involved with the CEOs. "(Beta)	Daily exchange on operational basis via several channels (operational care) Weekly exchange on daily business (operational care) Regular exchange to review and steer the collaboration on a strategic level (strategic care)	Value-in-use reporting

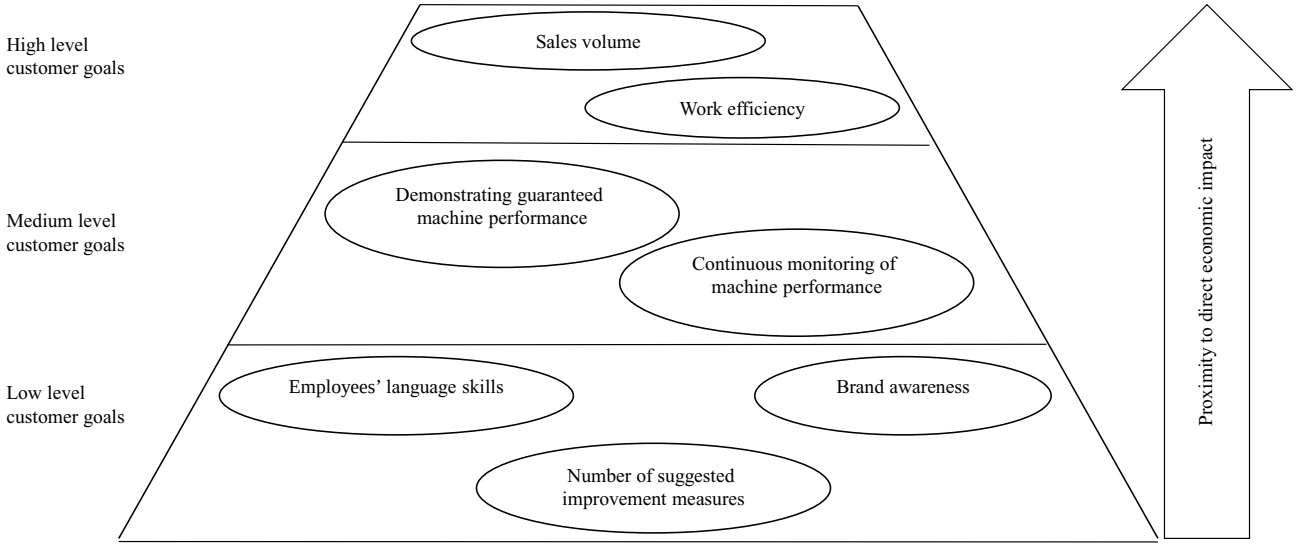

Fig. 1. Illustrative examples of value-in-use indicators.

high level goal, others rather indicate the achievement of subordinate goals. Fig. 1 exemplifies some of the identified indicators in a hierarchical structure.

Rugg, Mahmood, Rehman, Andrews, and Davies (2002) already noted that suppliers often neglect the higher-level customer goals. This may either be due to the fact that suppliers still follow a rather transaction-driven logic or because lower level goals are easier to measure (Macdonald et al., 2011; Tuli et al., 2007). Another explanation for indicating lower level goals or the absence of VIU identification that emerged from the data is the complexity of measuring the actual economic value created by the complex offering. This is because external factors that are not controllable by the supplier might influence the results. The head of business development at Ny made the following statement when explaining why the company would not measure the economic benefit for their customers: "[...] one must look at it over a year period to the previous year. But if you [the customer] have also invested in SEO [search engine optimization] in that time, there are again so many things which influence everything [i.e. economic benefit]. Now to measure exactly what only our tool does is almost impossible."

Moreover, a lack of information sharing between the supplier and the customer may serve as a further reason for not addressing higher-level customer goals. In particular, suppliers state that customers are not always willing to share sensitive data to enable the supplier to measure the created economic value. The chief operating officer at Omikron describes this as following: "To do that [measuring the economic value], we would have to know the customer's marketing strategy in detail. [...] In many cases, we are at the bottom of the relationship pyramid. That means we don't get the information that would allow us to assess our economic value." That phenomenon has been introduced as operational counseling by Tuli et al. (2007). Storbacka (2011) also emphasizes that the interface and communication between supplier and customer during the delivery is of high relevance. Ideally, both parties would have access to the same outcome performance data.

Finally, as value is cocreated, the customer is at least partly responsible for value creation (Tuli et al., 2007). Thus, some suppliers state that measuring their performance as indicated by the economic benefit they create for the customer may be misleading as it is not only a result of their own work. A quote from the head of customer service at Tau, may serve as an example: "No, so we don't have anything like that, that we have sanctions like that [if the customer does not achieve certain cost savings], because of course we can't, if the customer doesn't fill up at the cheap petrol stations, we can't influence that any further. We can only give him recommendations."

4.1.2. Indirect value-in-use identification

In addition, we identified measures implemented by suppliers that aim at indirectly deriving the created value for the customer, which we summarize under the term *indirect VIU identification* (see Table 2). In this regard, regular customer satisfaction surveys are widespread among the suppliers in the sample. Since the customer's satisfaction is determined by the experienced VIU (Bruns & Jacob, 2016), those surveys enable the supplier to indirectly identify the created value for the customer. In addition to formal satisfaction surveys, informal checks of customer satisfaction in personal conversations as another indirect VIU identification measure emerged from the data. The project leader at Epsilon, for instance, stressed the need for these informal satisfaction checks as part of the company's voice of the customer program that aims at identifying customer needs, structuring customer needs and providing priorities for customer needs (Griffin & Hauser, 1993): "Well, I would say we are already very aware of this in our company that the customer must be satisfied. It is driven a lot by this topic 'voice of the customer' [...] You're constantly urged to ask the customer about his aches and pains."

Another indirect VIU identification measure takes place solely on the supplier's side. In particular, software providers examine the customer's usage behavior (Benlian, Koufaris, & Hess, 2011) with regard to problems or deviations in intensity. The chief operating officer at Omikron explained it as follows: "For the time being, we are happy when customers use our product intensively. That is actually our main KPI, the intensive, daily, deep use of our product because we know that these customers stay with us."

Additionally, customer complaints should be considered as an indicator of organizational performance (Filip, 2013). Therefore, providing a channel for customers to complain in case of dissatisfaction and receiving these complaints (Bateson & Hoffman, 1999) can be seen as another measure to indirectly identify the created customer value.

4.1.3. Value-in-use reporting

The data further revealed three different approaches to pass on value-related information to customers that can be summarized as *VIU reporting* (see Table 2). Due to strong dependencies, the large extent to which the provider takes over processes for the customer company and work approaches that require close cooperation, some of the customers and suppliers exchange information via several channels on a daily

basis. Sometimes, they even work together on-site. For example, the sales and project manager at Beta described such procedures as following: “With onboard retail, when we take over the program completely, most of us have a few people sitting directly with the airline, who then control it [the program] from there and interact with the airline's individual functions and areas of business on a daily basis. It's a very, very close exchange.” This daily information exchange takes place between employees of the supplier and representatives of different business functions within the customer firm and focuses on diverse operational topics. It does not seem to follow a given structure as it is often demand-driven.

Also, weekly scheduled meetings or calls to exchange views with the customer appeared to be common among some of the supplier companies in the sample. The following quote of the division manager and member of the executive board at Iota shall serve as an example: “And then there is at least one call per week, usually called a production call, and this production call, we then go through the operational KPIs that have been agreed on with the customer.” These meetings were described to be important to exchange views on operational topics, to review the daily business and to discuss difficulties. Usually, people from the project teams of both sides are involved in these activities.

Helander and Möller (2008) refer to this frequent interaction between customer and supplier as operational care that aims at managing the daily business. However, the authors also state that operational care is only one part of managing a stable customer-supplier relationship, which is consistent with the results of our study. To promote a successful collaboration by reviewing long-term results of value cocreation and aligning customer's and supplier's vision of the future, a regular management contact on a strategic level is required. What Helander and Möller (2008) refer to as strategic care is described by interviewees as regularly scheduled meetings with management involved, sometimes framed as a quarterly review meeting. See Table 2 for an overview of all identified VIU monitoring activities including example quotes.

4.2. Value-in-use enhancement

4.2.1. Reflecting on opportunities for value-in-use enhancement

We also identified several measures of VIU enhancement that comprise reflecting on opportunities for VIU enhancement on the one hand and disseminating opportunities for VIU enhancement on the other hand (Macdonald et al., 2016). *Reflecting on opportunities for VIU enhancement* includes all supplier activities of detecting feasible improvements that aim at increasing value creation. Four different measures were defined (see Table 3).

The first is cause analysis that is mostly triggered by negative customer feedback or unsatisfying value results revealed through VIU monitoring. The cause analysis is exemplified by a comment from a key account manager at Alpha about their approach to react to unsatisfying value results: “So, then we would really do a cause analysis and based on this analysis we would also implement measures to counteract this.” Such measures thus correspond to root-cause analysis (Reichheld, 1996) as a technique to understand customer defections and to prevent those in the future.

Furthermore, fairs and conferences offer a platform for suppliers to reflect on opportunities to enhance quality of their offerings since they are temporary hubs that enable knowledge creation and exchange (Maskell, Bathelt, & Malmberg, 2006). While some suppliers in the sample only exhibit at fairs, others organize fairs and conferences for their customers themselves as the managing director at Pi explains: “We hold a user conference once a year […] where we bring users together […] where we try to create such a knowledge community around the topic product cost calculation.”

Moreover, the suppliers in the sample emphasize on-site customer visits as an important measure to develop a deep understanding of the customer's business. This measure seems to be especially important to generate customer-specific ideas for VIU enhancement as Terho et al. (2012) emphasize and as it is exemplified by the quote of a global head of solution business at Zeta: “[…] not only to sell from the catalogue, but to say, dear customer, let's go to your plant, maybe we have a completely different idea behind it.”

Regular internal meetings to discuss improvement potential were described by some of the interviewees as another measure to reflect on opportunities to enhance the customer's value. Internal meetings are part of the knowledge management within the supplier firm and are important to become innovative (Gupta, Iyer, & Aronson, 2000). Also, Storbacka (2011) emphasized the need for well-defined communication processes that enable suppliers to share information about new products or evolving customer needs between internal units.

4.2.2. Disseminating opportunities for value-in-use enhancement

The data also reveals ten measures that reflect how the suppliers in the sample *disseminate opportunities for VIU enhancement* (see Table 3), which is defined as all supplier activities of spreading and implementing ideas to increase the created value for the customer. For instance, customer support and training aim at enabling the customer to realize the full potential of the supplier's offering thereby enhancing the created value. The support can be contacted by the customer at any time usually via a hotline and web-based (Negash, Ryan, & Igbaria, 2003). Trainings tend to take place by arrangement selectively via webinars or on-site. Trainings offered by a supplier are mostly aimed at the employees of the customer company. They can be described as long-term care activity and may already start during the implementation phase (Helander & Möller, 2008). However, in some cases, offered trainings are targeting at the supplier company's own employees. This depends on the extent to which the supplier takes over value creating processes for the customer. A project manager at Iota exemplifies this by a comment about their customer service that is operated on behalf of one of their customers: “[…] our [customer service] agents who don't produce so much customer satisfaction, they are coached and so on. […] A lot is triggered when certain KPIs are not met.”

The created value is partly dependent on the allocated resources, for instance, the number of supplier's employees involved in the delivery phase. The supplier's attempt to reallocate resources is, therefore, another measure to enhance value creation (Engwall & Jerbrant, 2002). While some suppliers allocate more or other resources to the delivery process to enhance value creation, also employee motivation (Cadwallader, Jarvis, Bitner, & Ostrom, 2010) was mentioned by an interviewee as an opportunity to improve performance and therefore quality.

A further approach to enhance quality is conducting customer-supplier workshops, for instance, to close the gap between customers' expectations and realizable opportunities as exemplified by the comment of a project manager at Rho: “[…] we don't always work according to their [the customer's] ideas and now, what we're trying to change is to do a so-called briefing workshop with the customer to just show the customer what they need to write or how they need to brief us so they get what they expect.” Joint learning processes and problem-solving between supplier and customer are indispensable for continuous improvement (Imai, 1986). Furthermore, the results show that suppliers often see themselves as advisors to the customer. Helander and Möller (2008) describe such suppliers' consultancy services as an attempt to enhance the value of their own performance within the customer company. However, our results suggest that suppliers' consultancy services even go beyond their actual core business and are therefore classified as a VIU enhancement measure.

Maintenance services appeared from the data as another measure to enhance or secure value creation. As Helander and Möller (2008) describe, the provision of spare parts is the key part of hardware maintenance. However, some suppliers in the sample even offer to take over the whole maintenance process that includes spare parts and service personnel. Moreover, cross-selling and upselling are widely used by the suppliers in the sample. Both strategies aim at strengthening the

Table 3
Value-in-use enhancement.

First-order concepts	Illustrative quotes	Second-order theme	Aggregated dimension
- Cause analysis together with the customer	"Of course, if you find out that there is a big deviation and that in the wrong direction, you have to go in a positive clinch with the customer to find out what is the cause. "(Eta)	Cause analysis	Reflecting on opportunities for value-in-use enhancement
- Internal cause analysis	"And the client service director then, so to speak, gathered his team together in the agency and discussed with us what the problem was. "(Rho)		
- Exhibit at fairs	"For us, that is always the platform, the forum, where we exhibit such things. Since the HMI (particular fair) is now heading towards industry 4.0, what is there and how do the other companies do it, so that you also have the opportunity to exhibit your new ideas. "(Theta)	Fairs and conferences	
- Organizing fairs for the customers	"So, we have a fair at our premises that treats innovations on the market. Where the customers are then invited, where you look, to what extent you can perhaps also use this for the customer and how this could perhaps also influence the customer's business in the future. "(Sigma)		
- Organizing user conferences	"We hold a user conference once a year, in Europe once, in the USA even twice, where we bring users together, where we give lectures, where partners of ours give lectures, where we try to create such a knowledge community around the topic product cost calculation. "(Pi)		
- On-site visits to learn about the customer's application requirements	"Just so they see what we've got new. Then I said I'd like to come to you first and walk through the factory with you. Just to see things where I see improvement potential what the end customer doesn't see. Because he sees products, but doesn't know exactly how to integrate them into the systems in his factory. "(Zeta)	On-site customer visits	
- On-site visits to understand the customer's culture and processes	"But I do know that, for example, our trainers, the trainers who train our agents, etc., always visit the customer company […]. Yes, I've said that before, this stable smell, it's really important. "(Iota)		
- Internal meetings to facilitate exchange between different departments	"Either we say we've heard you have something new or product management is coming to us and says we have ideas. And then we drum up the sales departments or units involved, but sometimes the IT department is also there, and office staff, field staff, yes, and that usually takes place here at the headquarter. "(Tau)	Internal meetings	
- Internal meetings with the project/ customer team	"Of course, we have a weekly team meeting internally, where we discuss what's going on, what we want to do and what improvements we can make. "(Sigma)		
- Internal meeting with supervisor	"But yes, depending on what's going on, of course I have my supervisor, with whom I have meetings about all customers. Simply to discuss what we think, what is useful now, to either improve results […]. "(Alpha)		
- Supplier employees get trained to optimize performance for the customer	"Because our agents who don't produce so much customer satisfaction, they are better coached and so on. […] A lot is triggered when certain key figures are not met. "(Iota)	Training	Disseminating opportunities for value-in-use enhancement
- Customers get trained in using their suppliers'products and services	"We say we don't support our platform without training, so only trained users get support. "(Omikron)		
- After sales support via e-mail	"As I said, support is there, if something is wrong, then you can call at any time, starting from a certain package. And in the lowest package, if you already pay, you have e-mail support […]. "(Ny)	Customer support	
- After sales support via telephone hotline	"And then, when the project is implemented, the contact person at the working level is the support you can call if there is a problem somewhere. "(Pi)		
- Bringing more supplier employees to the customer project	"We had that as well, in case the customer doubts the results, then we got another team to the project and they tried to improve it [the result]. "(Lambda)	Resource allocation	
- Replace supplier employees	"We'll try it, if someone doesn't perform, they'll just be replaced by someone else. "(Ypsilon)		
- Motivation program for customer employees as important success driver	"So, because there is nobody else on board who can somehow control the sales, we are very, very dependent on the crew. This means that we also have a lot of interaction with the crew, where some events are organized or there are raffles for them, incentive programs, some fairs, where new products are presented to them. Where the crew is very, very strongly involved to motivate them, I would say. "(Beta)	Employee motivation	
- Workshops at the supplier's premises to align cutomer expectations and viable options	"If there is actually such a huge gap between the client's expectations and realizable possibilities, workshops are very often held. Workshops are held to pick up the client, to show what it is really like. In general, it's a fact of life in my company that our clients come frequently. "(Iota)	Workshops	
- Workshops to teach the customer in supplier industry specific topics	"[…] we hold workshops for some of our customers more often. To give customers a deeper insight into the entire media industry. "(Sigma)		

(*continued on next page*)

Table 3 (*continued*)

First-order concepts	Illustrative quotes	Second-order theme	Aggregated dimension
- Advise the customer with respect to own product/ service	"The cooperation is very close and one of our USPs is that we understand the subject of product cost calculation very well. So, the customer also buys from us because he knows that he also gets a certain consultation in addition to the software. "(Pi)	Consultancy service	Disseminating opportunities for value-in-use enhancement
- Advise the customer beyond the core product/ service	"Since we are very strongly represented internationally, we have even supported our customers in their project discussions on site. So, not to bring our product in, but simply to help them [the customer] to start successfully into the market there. "(Eta)		
- Preventive maintenance	"And I think that everything goes in the direction of this classic total cost of ownership concept, which we support relatively strongly with the entire topic of service and preventive maintenance. This means not waiting for the component to fail, but rather that the component is so intelligent that it says attention, I'm going to have a problem the day after tomorrow, my seal will break. "(Eta)	Maintenance service	
- Maintenance on a regular basis	"So, what many customers choose are these long-term contracts for regular maintenance. "(Epsilon)		
- Cross-selling	"It works differently, from the sales representative who calls his customer because he hasn't heard from him for a long time and says we currently have two or three new products in our portfolio that I want to show you […]. "(Delta)	Cross-selling and up-selling	
- Up-selling	"And then we have always, we have ongoing developments and then you can just tell the customer here, look, you're interested in the efficiency of your machine. With this you can get a bit more power out of every liter gas. If we know that, then we'd point it out to him. "(Epsilon)		
- Developing new products together with key customers	"We also have key customers, which we then invite specifically for new ideas to jointly generate products and solutions, which are then either valid for the general market, has the advantage for the customer, he gets that at the normal price or, depending on the customer, we can also say attention, you get a preference for the next two years, you are exclusive but then it goes over to the general market. "(Eta)	(Joint) product development	
- Product development based on customer feedback from the field	"I pass on my input, what I hear from the customers and therefore I am involved in the development, but from the technical part I have almost no idea and therefore I am not involved there now. "(Ny)		
- Product development based on feedback from certain customer group	"So, we have our own product management department, those who tell the development department, so to speak, what needs to be developed. And they have the task to interact regularly with our customers. There is a customer advisory board, and in this context there are regular bilateral or multilateral meetings where future solutions are presented, processes discussed, questions asked, so to speak. "(Pi)		
- Product development based on collaboration with universities	"Of course we are in the field of language training, which means that we also work a lot with the academy. We have partnerships with universities worldwide, where we simply do research in the field of language training, together with universities. "(Alpha)		
- Product development based on market trends	"There are also what we established here some time ago, departments, central departments [..] they look explicitly into certain industrial sectors in order to try to develop their own ideas about what we could do. Central departments that are not measured by sales in the sense of what they sell, but what ideas they have. They should recognize trends. That is, they are trend scouts, they are business developers. "(Theta)		
- Offering discounts	"And now casually, so I don't want to open a door now, but in order to get the customer's satisfaction back in some way, you can tell him, ok next time you buy a device, I'll give you a bit of a discount, because I don't want to lose you as a customer." (Delta)	Discounts and free features	
- Offering free features	"[…] first of all the question why they quit, if we can be of any help, to get into conversation and to see how you can turn it around. It's mostly about the price or the features you add for free. "(Ny)		

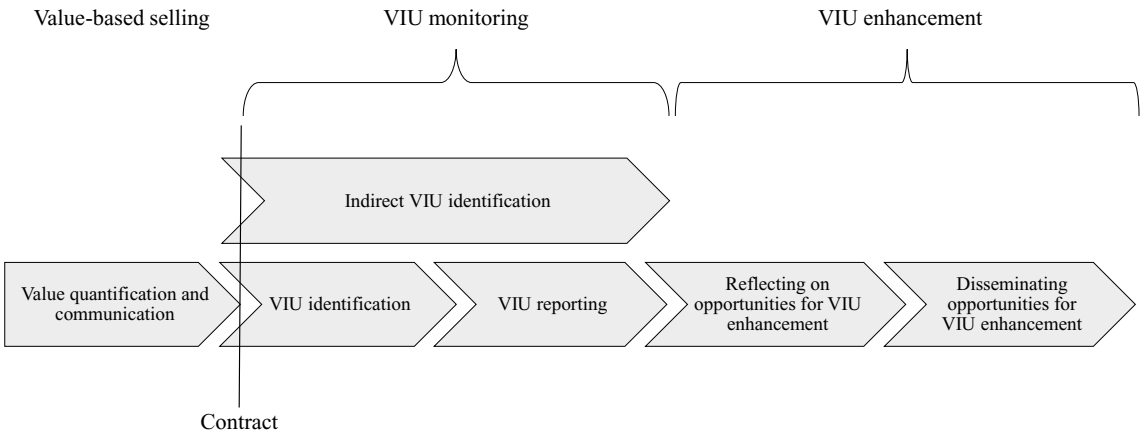

Fig. 2. Value-in-use management process.

relationship with the customer and generating further business in a cost-efficient way. However, suppliers have to be careful, as too many or valueless cross- and upselling attempts can have a negative impact on the relationship (Ansell, Harrison, & Archibald, 2007). The project leader at Epsilon explained it as following: "No, what we do actively is […] when we now see improvements for his [the customer's] machine or have somehow determined improvements from the past, look here, there was a problem here and so on that we contact him and of course try to generate another business and offer him better solutions for certain things."

Usually, suppliers' attempt to develop new products alone or in collaboration with the customer is a reaction to evolving customer needs and environmental change as technological progress. In line with the findings of Kaulio (1998), the suppliers in the sample involve their customers at different phases of the development process. Some suppliers even involve certain key customers in the detailed design process and jointly develop prototypes. However, the goal is to develop ideas that have potential for other customers as well. Also, Storbacka (2011) stressed the importance of documenting new customer-specific developments in a way that enables the supplier to reuse them for future business as an important practice within business markets.

Finally, offering discounts appeared as a measure to add value for the customer, at least in the short term. However, Woodruff (1997) noted that the price may influence an immediate purchase decision but might not be as relevant when it comes to building long-term relationships. See Table 3 for an overview of all identified VIU enhancement activities including example quotes.

4.3. The link between value-in-use management and value quantification and communication

Based on our data, we reveal widely unexplored links between VIU management and well-known concepts in business markets, i.e. value quantification and value communication. Hence, VIU management is not an isolated process during the customer's usage phase. It is rather linked to the promises made by the supplier through value quantification and communication during the sales process (see Fig. 2).

In line with a value-based selling approach (Terho et al., 2012), suppliers in the sample quantify the offering's value as part of their sales process. For this purpose, they use lifecycle calculations, return-on-investment studies, simulations, and customer specific value calculations. As a comment from a sales and project manager at Beta illustrates: "In the offer phase, we always make a business model where we say ok, we believe that along with our technologies, we can achieve these KPIs." This reflects that value quantification methods aim at demonstrating that the offering's price is less than the sum of the customer benefits (Hinterhuber, 2017).

Furthermore, credible communication of such sales arguments is highlighted as being important to reduce the customer perceived risk during the sales process. Terho et al. (2012) define trust, transparency, and openness as crucial conditions for selling value-based offerings successfully. However, our interviewees highlighted the importance of these conditions not only within the initial sales process but also as a prerequisite for building and maintaining long-term customer-supplier relationships. In particular, transparency and open communication were often mentioned as a means to handle occurring problems. This is consistent with already existing research results that show the positive impact of transparency or trust on customers' rebuy decisions or decisions to increase commitment with the supplier (Eggert & Helm, 2003; Lemke et al., 2011; Selnes, 1996).

To demonstrate capability and credible commitment to deliver the promised value, suppliers' in the sample use guarantee agreements and reference stories thereby reducing the customer's perceived risk (Terho et al., 2012). Table 4 gives an overview of the identified activities of value quantification and communication including example quotes.

While most suppliers in the sample quantify and communicate the offering's value during the sales process, subsequent proof that the promised value has been achieved is not always carried out. Our data thus reveals a gap between ex-ante value quantification and ex-post VIU management, which is shown by the statement of the managing director at Pi: "So, what we are doing more intensively is we have built such a ROI calculator, where in principle we, together with the customer in the pre-sales phase, simulate what the benefit will be. […] But that's just it, the follow-up afterward doesn't really happen."

Summarizing, Table 5 provides an overview of all sub-processes that are part of the VIU management process in general.

4.4. Variety of value-in-use management activities

Our results further show that not all suppliers are equally committed to VIU management as their VIU monitoring and enhancement effort varies a lot. Even within one company, efforts in interacting with the customers during their usage processes differ. Limited resources appeared from the data as the main reason for not serving every customer equally well. Therefore, the interviewees set priorities based on customer potential that is, for instance, related to the size of the customer firm or the project phase. This observation is illustrated by a key account manager at Alpha, who stated: "Well, if I invest a lot of time,

Table 4
Value quantification and value communication.

First-order concepts	Illustrative quotes	Second-order theme	Aggregated dimension
- Calculation of lifecycle costs	"We simply calculate lifecycle costs using examples, which we then actively use as a marketing basis. Because that is of course always the decision […] what final advantage do I have over the term of 10, 20 years, compared to the other solution." (Eta)	Lifecycle calculations	Value quantification
- Joint development of proto-type/ demo	"We might even develop prototypes of some devices that could be used there. And we do this in very close collaboration with the customer […]. "(Theta)	Simulation of functionality	
- Live demonstration	"And we also have the opportunity to demonstrate things live in the application hall, because with this we can convince people. [...] Exactly and we also test new things that we, the customer, demand. We can test them together with him [the customer] before it goes to his factory. "(Zeta)		
- Calculate potential savings for the customer	"We can then define this [time savings] very clearly and also explain to the customer how and what the savings will be. "(Tau)	Customer specific calculations	
- Forecast of KPI's	"In the offer phase, we always make a business model where we say ok, we believe that along with our technologies, we can achieve these KPIs. "(Beta)		
- Qualitative evaluation of potential customer value	"For example, our project was started in such a way that we taught them this whole customer experience methodology [...] and afterwards it was a purely qualitative evaluation. What the management and the whole board believed. "(My)		
- ROI calculation	"[...] we have built such a ROI calculator, where in principle we, together with the customer in the pre-sales phase, simulate what the benefit will be. […]. And that's a pretty important tool in sales." (Pi)	Return on investment studies	
- Guarantees	"So, for once I have to differentiate a bit here, because what is agreed on in the contract is mostly about a guarantee that the solutions we offer is available as we said and especially since we also offer virtual solutions. It has a lot to do with service guarantees that the virtual solution will work and so on. "(Alpha)	Risk reduction strategies	Value communication
- Reference cases	"We say we just did certain A/B tests with customers, which is true, and we saw conversion increases between 9 and 35%, for example. "(Ny)		
- Trust	"I'm in good hands, and I trust them, they [the customers] should simply feel like well taken care of during an audit or a visit to a factory. And thus it is also an active sales measure to bring customers to our plants. "(Eta)	Demonstration of long-term orientation and credibility through interpersonal bonds	
- Transparency	"That's why it's important that when we find out that something is not going well, that we present it in a really transparent way, and also make suggestions and explain to the customer that if we do that, it can have a positive effect, but we also need resources from you, so to speak. "(Alpha)		
- Openness	"And we can only achieve this through open communication, through the willingness to listen. Yes, the customers must also notice when they tell us something, then something happens. "(Pi)		

Table 5
Sub-processes of value-in-use management.

Sub-processes	Definition	Description
Value quantification	Suppliers' measures to quantify value "aim to build evidence for the offering's monetary implications in the customer application for value in use" (Terho et al., 2012).	Suppliers' measures to quantify the value of their offerings in order to build evidence for the potential monetary implications for the customer firm. These measures are part of the sales process. This includes for instance customer return on investment studies (Terho et al., 2012).
Value communication	Suppliers' measures to credibly demonstrate "the offering's contribution to the customer's business profits" (Terho et al., 2012).	Suppliers' measures to convince customers in a credible manner that the proposed offering would positively impact their business statement. These measures are part of the sales process. This includes for instance risk reduction strategies as guarantees (Terho et al., 2012).
VIU identification	All supplier activities of measuring indicators that aim at reflecting the created VIU of the complex offering and that are meant to be reported to the customer during the delivery phase.	Suppliers measuring indicators that aim at reflecting the created VIU of the complex offering. MeasuringVIU indicators takes place during the after-sales process. VIU indicators for instance express the created economic value of the complex offering for the customer firm.
Indirect VIU identification	All supplier activities of indirectly deriving the created VIU of the complex offering.	Suppliers' measures to indirectly derive the created VIU for the customer firm. These measures are part of the after-sales process. This includes for instance measuring customer satisfaction.
VIU reporting	All supplier activities of passing on information to the customer with respect to VIU creation.	Suppliers' measures to pass on information to the customer firm with respect to VIU creation. These measures are part of the after-sales process. This includes for instance regular meetings between customer and supplier on strategic level.
Reflecting on opportuntities for VIU enhancement	All supplier activities of detecting opportunities to improve the quality of the complex offering and increase VIU.	Suppliers' measures that aim at detecting opportunities to enhance the created VIU internally or together with the customer. These measures are part of the after-sales process. This includes for instance visiting customer firms to learn about their specific needs.
Disseminating opportunities for VIU enhancement	All supplier activities of spreading and implementing ideas to enhance the VIU of the complex offering.	Suppliers'measures to spread and implement ideas to increase the VIU for the customer firm. These measures are part of the after-sales process. This includes for instance employee motivation programs .

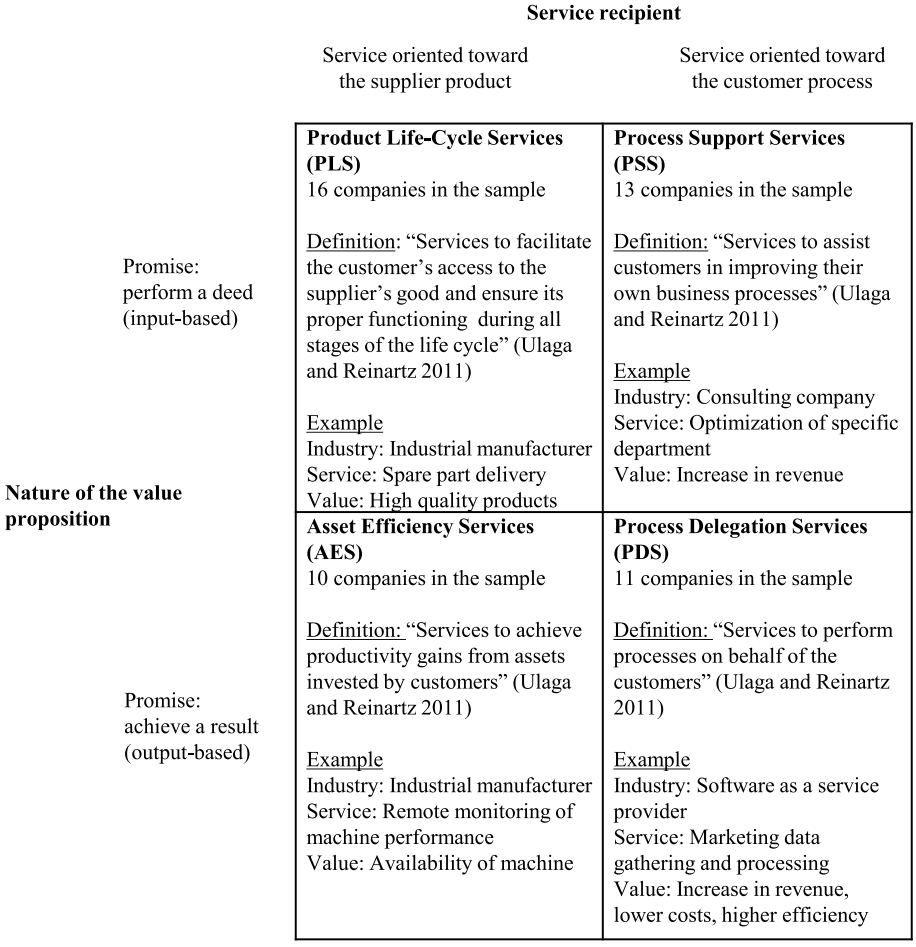

Fig. 3. Sampling with respect to types of offerings.

Table 6
Spread of the types of complex offerings in the sample.

	Type of complex offering			
Company	PLS	PSS	AES	PDS
Alpha	X	X	X	X
Beta	X	X	X	X
Gamma	X			
Delta	X	X		
Epsilon	X	X	X	X
Zeta	X	X		
Eta	X		X	X
Theta	X		X	
Iota		X		X
Kappa	X	X		X
Lambda		X	X	
My				X
Ny	X			
Xi	X	X		
Omikron	X	X	X	X
Pi	X	X	X	
Rho	X		X	
Sigma	X	X	X	X
Tau	X	X		X
Ypsilon				X

Table 7
Distribution of quotes among solution providers and non-solution providers.

VIU management sub-processes	Number of respective quotes	
	Solution providers	Non-solution providers
Value quantification	8	5
Value communication	16	10
VIU identification	17	3
Indirect VIU identification	10	12
VIU reporting	20	5
Reflecting on opportunities for VIU enhancement	18	12
Disseminating opportunities for VIU enhancement	36	34

then of course, quite simple, I'm hoping to make a profit somewhere in the end. […] it always has to do with potential." This observation is in line with Bonney and Williams (2009), who identified resource availability as an antecedent to opportunity recognition when selling solutions. In this context, resources are for instance represented by time and attention allocated to a specific account (Bonney & Williams, 2009). It is also striking that interviewees often declared to have no fixed processes for after-sales interaction with customers including VIU management measures. This is exemplified by the statement of a managing director at Eta: "To say, why does he [the customer] buy from us, what benefits have we highlighted, what personal benefits do we bring in. We have not yet mapped this to monitor it sustainably and then benchmark it, where do we still have to optimize ourselves? That still is a little, like many things in sales, based on gut feeling."

4.5. Differences between types of offerings

While some suppliers in the sample have implemented VIU management measures, others even largely try to avoid interaction with the customer during the delivery phase. Hence, to better understand the differences between the VIU management efforts of companies providing various types of complex offerings, we took a closer look at our sample. According to Ulaga and Reinartz (2011), complex offerings that combine products and services can be distinguished into four different categories. The categories differ in terms of two dimensions, (1) the service recipient (oriented towards supplier product or customer process) and (2) the nature of the value proposition (input-based or output-based). The authors refer to the four different categories as Product Life-Cycle Services (PLS), Process Support Services (PSS), Asset Efficiency Services (AES) and Process Delegation Services (PDS). To enable the detection of patterns or interrelations between the types of offerings and suppliers' VIU management effort, the offerings of the companies in our sample were assigned to the different categories. Therefore, the participants received a questionnaire after the interviews via email. By means of four questions, they were asked to allocate their company's offerings to one or more of these categories. All four categories introduced by Ulaga and Reinartz (2011) were covered by the companies in our sample. As most of the companies in the sample are active in several of the four categories at the same time, it was not possible to detect patterns or interrelations between the four different types of offerings and the suppliers respective VIU management efforts (see Fig. 3 for the distribution of the sample with respect to types of offerings). In addition, see Table 6 for a detailed overview of how the types of complex offerings were spread in the sample of the 20 different companies.

Consequently and due to the current importance of solutions business (Friend & Malshe, 2016), we focus our further analysis mainly on the differences between solution providers and non-solution providers in this regard. Only eleven firms were assigned to the category representing solutions in a narrow sense (PDS), i.e. providing offerings that are oriented towards the customer processes and that comprise promises to achieve a certain result at the same time (Ulaga & Reinartz, 2011; Worm et al., 2017). Obviously, even though the companies in our sample claimed to offer solutions for their customers – at least on their company websites –, not all of them actually pursue a solution business model according to this understanding. This resonates with Day's (2004) assumption that solution selling in many cases is more of a fashionable statement for some companies.

To identify potential differences among solution providers and non-solution providers in the sample, we compared the statements of the interviewees that assigned their company to the solution category with those that did not. Table 7 illustrates the distribution of quotes among solution providers and non-solution providers in the sample.

While we cannot detect major differences in value quantification and value communication efforts between the two groups, there are major differences concerning VIU monitoring. Only very few non-solution providers in the sample actually make an effort to identify and report the created value in contrast to the solution providers in the sample. Indirect VIU identification, on the other hand, seems to be equally common among non-solution providers and solution providers. There is also no major difference in VIU enhancement measures. Therefore, while solution providers rather implement concrete VIU management processes, non-solution providers tend to focus on measures that are intended to potentially enhance VIU during the customer's usage processes. Based on these findings, one can conclude that VIU identification and reporting do not seem to be as relevant for non-solution providers. Still, they have to keep up with the competition and therefore adapt their offerings over time, that is reflected in the identified VIU enhancement measures. However, this conclusion is way too simple, especially considering the fact that also non-solution providers quantify the potential value for the customer during the sales process or guarantee their customers to achieve a certain result. Furthermore, not all solution providers in the sample perform a VIU management process including all identified sub-processes. It seems as if awareness of the necessity of VIU management is not yet fully present among the supplier firms. In addition, the implementation of particular measures still involves difficulties, especially concerning VIU identification as mentioned before.

5. Discussion

Value-related research in business markets has largely focused on value propositions and value selling, thus given limited attention to the phases of delivery and usage. Therefore, to date, only little is known about the interactions between suppliers and customers during the actual value cocreation that takes place throughout the entire relational processes when using complex offerings, how they affect customers' perceived value, and how these customer perceptions can be influenced by provider activities of VIU management. Beyond this backdrop, the aims of this study were to explore what VIU management activities are currently implemented by providers of complex offerings in business markets, how they are interlinked with other business processes, and what differences exist with respect to VIU management depending on the type of the complex offering. In a nutshell, we identified 23 different activities that form the sub-processes of VIU management revealed by Macdonald et al. (2016). Further, our results show that it is both practically and conceptually necessary and expedient to establish a link between VIU management on the one hand and the well-known sales concepts of value quantification and value communication on the other. Lastly, our study indicates that pure solution providers are currently the ones who put the most effort on VIU management activities compared to other providers of complex offerings.

5.1. Theoretical contributions

The findings of the study make four main contributions to the literature on hybrid offerings, servitization and solutions as well as on value-related literature in B2B contexts.

First, building on existing value-related research in various fields of B2B marketing, we develop a detailed conceptualization of VIU management. Our results especially complement the process-oriented view on value cocreation in general (Malshe & Friend, 2018) and servitization and solution business in particular (Kindström & Kowalkowski, 2009; Storbacka, 2011; Tuli et al., 2007). So far, from a supplier's perspective, VIU management has roughly been defined as a combination of activities of VIU monitoring and VIU enhancement (Macdonald et al., 2016). While several studies explicitly or implicitly highlight the importance of VIU monitoring and/or VIU enhancement in business relationships (see Appendix Table A1), there was no clear understanding of what kind of activities can be subsumed under these umbrella terms. Besides providing a detailed list of activities that are related to these concepts, we could also show that the indicators that are used to measure VIU differ in their informative quality. While some suppliers actually assess the accomplishment of the created economic effects for the customer as the ultimate goal, others rather indicate the achievement of subordinate goals. Such indicators, like sales volume or brand awareness, are then reported to the customer firms as a part of regular operational and strategic meetings. In addition, suppliers use indirect methods to derive the created value for the customer, as for instance customer satisfaction surveys. These differences also emphasize that there is a need to develop and implement consistent VIU management processes in order to actually achieve the goals pursued, i.e. monitoring and enhancing customer perceived VIU.

Second, our results also complement value-related literature in B2B contexts (e.g., Eggert et al., 2019). In addition to the conceptualization of experienced VIU as a dynamic construct of the customers' perceptions which change over time, we can show that suppliers of complex offerings in business markets need and are able to perform activities to secure or even enhance the value promised in value propositions. This means that the dynamics of customer experienced VIU not only is a challenge but also an opportunity. This is even more important as, according to Macdonald et al. (2016), VIU management activities themselves impact VIU dimensions as perceived by the customers, which in turn influence relational outcomes as satisfaction and trust that are known to trigger rebuy decisions (e.g. Lemke et al., 2011).

Third, our study uncovers a missing link between the research areas as well as the practical implementation of value quantification and communication that is anchored in the field of value-based selling on the one hand, and VIU management taking place in the post-purchase phase on the other. By linking VIU management with these well-known concepts of value quantification and value communication our study enriches current literature on value-based selling and value cocreation. The results of our study show that value is typically quantified in the process of defining a value proposition of a complex offering based on the customer's goals. However, this is not always the case during the delivery und usage phase, even though complex offerings only develop their value for the customer firm here. In this regard, VIU monitoring, in particular the identification of appropriate VIU indicators, seem to be the main challenge. As a complex offering's contribution to customers' goal achievement has an effect on how they assess experienced VIU (Eggert et al., 2019), our findings emphasize the high relevance of defining appropriate indicators for VIU identification. Hence, VIU management during the post-deployment phase should strongly be linked to value quantification and/or communication during the sales process (e.g., Terho et al., 2012). Existing research on value selling can and should thus be used to further develop concepts and activities of VIU management.

Fourth, we contribute to Ulaga and Reinartz's (2011) framework of hybrid offerings by suggesting that the capability but also the necessity and the usefulness of operating VIU management differs with respect to the four identified types of offerings. Therefore, the ability of operating VIU management might be added as another criterion to distinguish offerings which combine products and services in business context (e.g. solutions).

5.2. Managerial implications

The sub-processes of VIU management as introduced by Macdonald et al. (2016), relate, first, to the identification and reporting of VIU and, second, to the reflection and dissemination of opportunities to enhance VIU throughout the customers' usage processes. Ideally, the identified measures of VIU management build on each other and thus represent an integrated process themselves. Consequently, to operate VIU management successfully, it is necessary to design respective processes that define the activities and responsibilities of the units involved. The generic VIU management process, shown in Fig. 2, as well as the specific activities listed in Tables 2 to 4, can serve as starting points for such a process development.

However, our results show that supplier firms often lack a systematic VIU management process that comprises all identified subprocesses. For instance, some suppliers in our sample do not identify and/or report the created economic value of their offering at all. This is due to several reasons, such as a lack of information sharing between the customer and the supplier. To enable VIU identification nevertheless, suppliers partly resort to indicators that are easy to measure, thereby tend to indicate the achievement of customers' sub-goals rather than the actual economic value of their offering. Since the offering's contribution to goal achievement has an effect on how customers assess the experienced VIU (Eggert et al., 2019), our findings emphasize the complexity and high relevance of defining appropriate indicators for VIU identification. This is not only relevant for VIU management, but also rather important for value quantification during the sales process. As the results of our study show, value is often quantified in the process of defining a value proposition, but not always during the delivery.

Hence, value propositions might be made and perhaps also contractually fixed, which later cannot be kept, especially if they are not monitored. This entails the supplier's risk of lost revenues and profits, if

customers decide to terminate the business relationship due to unsatisfactory outcomes. Therefore, in order to reduce this risk, suppliers of complex offerings should effectively manage the created VIU for the customer. Consequently, only those value dimensions should be quantified and communicated to the customer before or when a contract is signed that can be identified and reported as part of the VIU management process afterwards. Hence, it is not sufficient to view VIU management as isolated sub-processes that are executed in the delivery phases or after delivery. Rather, they must be systematically linked to the corresponding sales processes as well as necessary feedback loops need to be implemented.

For some years now, there is a trend towards customer success management (Hochstein, Rangarajan, Mehta, & Kocher, 2020) seeking to make the customer as successful as possible while using a provider's offering. This trend can be observed in particular when recurring revenues are a central aspect of the supplier's business model as is the case for subscription models (Zoltners, Sinha, & Lorimer, 2019). Although there are already some practical approaches to structure this process, customer success management can still benefit from our research results when it comes to implementing it into the company operations. However, our study shows that the experienced VIU and thus customer success should not only be a target outcome for suppliers of subscription models, but also for those of other complex offerings.

Our results further show that VIU management often lacks the resources needed. Given the fact that resource availability is considered to be an antecedent of opportunity recognition in solution business (Bonney & Williams 2009), it is not only necessary to define a process that enables suppliers to effectively and efficiently manage customers' VIU, but also to provide the respective resources to exploit more of the existing customer potential.

Besides such aspects that are related to the supplier side, successful implementation of VIU management also faces challenges that result from customer behaviors. Especially for conducting activities of VIU monitoring, suppliers need insight views into the customer processes to implement comprehensive VIU management measures. Such insights, though, cannot only be used to improve the customer processes as well as the profitability of a customer firm. As this is typically connected with a supplier-specific adjustment of the respective customer processes, this may also help to improve the competitive position of the supplier, which in turn leads to greater dependence of the customer firm. Therefore, as Raddats, Kowalkowski, Benedettini, Burton, & Gebauer, 2019 point out, suppliers need to acknowledge that also customers take a certain risk when making use of such offerings including respective VIU management measures and thus need to develop a trustful relationship with their customers. Business customers, however, usually are aware of such possible negative developments and weigh the disadvantages of a greater dependence against the advantages of VIU enhancement. This is not only about avoiding customers' fear of providing sensible business data. Customers might also fear price increases in case suppliers figure out that the economic value they create for the customer exceeds previous promises. Moreover, since customers, at least partially, perform VIU management measures themselves (Macdonald et al., 2016), it is questionable if they are interested and willing to provide suppliers with the relevant information enabling them to identify the created economic value. VIU management could thus also benefit from jointly practicing the corresponding activities.

5.3. Limitations and future research

As is the case in any research project, our project has a number of limitations that, on the other hand, offer opportunities for future research. First, our study followed an explorative approach by employing interviews with participants representing different supplier companies in Germany. Hence, more research is required to assess whether the identified measures are generalizable across industries and countries.

Second, future research should focus on developing a reliable scale to measure the extent to which VIU management as a whole as well as its various sub-processes are put into practice in a supplier firm. This would provide suppliers with an effective tool to identify opportunities for improving the after-sales interactions with their customers.

Third, our study considers only the suppliers' perspectives on VIU management. Consequently, a further step would be to investigate the customers' view of VIU management. In addition, collecting dyadic data from different actors within supplier and customer companies is likely to deepening insights on VIU management. Especially, its impact on the customer's experienced VIU and consequently on customer's rebuy decision would be a promising avenue for further research.

Fourth, from the customer's perspective, VIU management may not always and in each and every aspect be seen as being positive. Our results suggest that there are certain conditions in which an intensive VIU management process makes sense for all parties involved, whereas in other situations the negative aspects may outweigh the positive ones. Identifying such constellations and describing the respective scenarios thus builds another useful subsequent step following a deeper analysis of the customer side.

Fifth, our research suggests that value quantification and VIU management are interrelated processes. In line with Hinterhuber (2017), we thus stress the importance of future research approaches investigating the relationship between value quantification especially in sales processes and VIU management.

6. Conclusion

Customer's perceived value in use is a key concept when it comes to purchasing and marketing decisions in business-to-business settings. As value in use is dynamic by definition (Eggert et al., 2019), suppliers need to perform continuous management activities including value-in-use monitoring and enhancement in order to build long-term relationships with their customers. This explorative study examined the processes of value-in-use management from the perspective of suppliers of complex offerings in different industries. Based on the findings generated through interviews, we conclude that most suppliers of complex offerings perform value-in-use management activities. However, their efforts in this regard vary a lot dependent on the different challenges that are associated with the various types of complex offerings they provide. Therefore, a consistent process where corresponding value-in-use management activities ideally build on each other still needs to be developed. As it turns out, value-in-use monitoring, and especially defining adequate value-in-use indicators is a huge challenge for the supplier firms. This is especially true since these indicators should be strongly linked to the promises made by the supplier during the sales phase. Hence, value-in-use management is not an isolated process during the post-deployment phase. Value quantification and/or communication that usually takes place during the sales process need to be part of it, too. However, by securing and enhancing the customer's value in use which is dynamic by nature, value-in-use management is not only a challenge but rather a great opportunity for suppliers to promote long-term business relationships. Given the importance of customer's value in use in business markets, we believe that our findings provide insights that are useful both for further research on value in use as well as for the practice of marketing complex offerings.

Appendix

Table A1
Literature overview.

Study	Definition of value	Value-in-use monitoring	Explicit measurement dimensions	Value-in-use enhancement	Explicit measurement dimensions
Gassenheimer et al., 1998	”Net value includes all benefits (e.g. social value and reputation) and costs (e.g. legal restitution costs, switching costs, make-versus-buy costs, sunk costs, and stress) involved in the relationship.” (p. 328)	”When relationships are in decline but salvageable, denying relational decay or hesitating to identify and monitor symptoms of discontent or pathological behaviors could result in unnecessary dysfunctional conflict and distorted views of the value of continuing the relationship.” (p. 324)	–	”Relationships that were once successful may also diminish in value as requirements for accomplishing goals change over time. […] We argue that a better understanding of both parties and their perceptions […] will help for the relationships future.” (p. 328)	–
Woodruff, 1997	“[…] a customer's perceived preference for and evaluation of those product attributes, attribute performances, and consequences arising from use that facilitate (or block) achieving the customer's goals and purposes in use situations.” (p. 142)	“Today's organizations are good at tracking their financial performance. Tomorrow's organization must become just as good at tracking customer value delivery performance.” (p. 148)	–	“[…] competitive advantage in the future will come from discovering new ways to meet a customer's desired value. Innovation often starts with the invention of new technology, but it also can come from building an in-depth understanding of a customer's desired consequences and use situations.” (p. 148)	–
Flint et al., 2002	”[…] a customer's perceived preference for and evaluation of those product attributes, attribute performances, and consequences arising from use that facilitate (or block) achieving the customer's goals and purposes”. (Woodruff, 1997, p. 142) (p. 103)	“[…] monitoring tension levels among managers in customer firms may help suppliers predict when and how fast value change will occur.” (p. 115)	–	“[…] proactive marketers actively influence changes in customers' desired value by helping customers interpret the changes in their environments, respond to those changes, and possibly avoid undesirable changes.” (p. 115)	–
Beverland & Lockshin, 2003	”[…] a customer's perceived preference for and evaluation of those product attributes, attribute performances, and consequences arising from use that facilitate (or block) achieving the customer's goals and purposes”. (Woodruff, 1997, p. 142) (p. 654)		–	“[…] business customers place demands for change in the suppliers' offer and actions as a means of achieving their evolving goals or purposes.” (p. 654)	–
Tuli et al., 2007	Not defined.		–	“Importantly, postdeployment support in the case of solutions is more than providing spare parts, operating information, and routine maintenance. Postdeployment support also includes deploying new products in response to evolving requirements of a customer.” (p. 7)	Yes
Helander & Möller, 2008	Not defined.		–	“The results show how the role of a solution provider can be achieved through careful coordination of four identified supplier's customer activity sets warranty services, support and maintenance activities, system extensions, and consulting and optimization services. “(p. 247)	Yes
Storbacka & Nenonen, 2009	Not defined.	„[…] we suggest that value capture can be measured by the discounted present value of all future economic profit that the customer relationship generates, and that this can be used as a proxy for the shareholder value creation. “(p. 363)	Yes		–
Bonney & Williams, 2009	Not defined.		–	“[…] solutions salespeople must be alert to patterns and changes within a customer's macro and micro environments and develop responses to these customer dynamics in way that produces profits for their own firms.” (p.1035)	–
Storbacka, 2011		“Value verification is a set of commercialization capabilities and practices employed to verify and report to both customer	Yes	”[…] the need to […] plan corrective actions if delivery is at risk for one reason or another.” (p. 707)	–

(*continued on next page*)

Table A1 (*continued*)

Study	Definition of value	Value-in-use monitoring	Explicit measurement dimensions	Value-in-use enhancement	Explicit measurement dimensions
	"[…] is always determined by the customer (value-in-use); it cannot be embedded through manufacturing." (derived from Vargo and Lusch 2008) (p. 705)	and provider that the planned value has been created, and to document successful deliveries." (p.706)			
Macdonald et al., 2011	"[…] a customer's outcome, purpose or objective that is achieved through service." (p. 671)	"[…] to effectively elecit a customer's assessment of value-in-use, customer perceptions need to be measured up as well as down the hierarchy of customer goals." (p. 673)	–	"The danger of no longer holding that conversation at managerial level with the customer meant that […] the provider might have missed key opportunities to protect and continue to enhance the relationship." (p. 680)	Yes
Töytäri et al., 2011	"[…] the difference between customer's desired value and the customer's total cost of ownership." (p. 494)	"[…] to show the commitment to the relationship, the supplier needs to verify and document the realized post-purchase value and map the customer's satisfaction." (p. 500)	–		–
Macdonald et al., 2016	"[…] all customer perceived consequences arising from a solution that facilitate or hinder achievement of the customer's goals." (p. 97)	"All supplier activities of identifying and reporting the value in use resulting from the solution." (p. 107)	–	"All supplier activities of reflecting on and disseminating opportunities for value-in-use enhancement." (p. 107)	–
This study	"[…] all perceived consequences arising from resource integration … that facilitate or hinder achievement of the actor's goals" (Eggert et al., 2019, derived from Macdonald et al., 2016, p. 98)	"All supplier activities of identifying and reporting the value in use resulting from the solution" (Macdonald et al., 2016).	Yes	"All supplier activities of reflecting on and disseminating opportunities for value-in-use enhancement" (Macdonald et al., 2016).	Yes

References

Ansell, J., Harrison, T., & Archibald, T. (2007). Identifying cross-selling opportunities, using lifestyle segmentation and survival analysis. *Marketing Intelligence & Planning, 25*(4), 394–410.

Bandura, A. (1988). Self-regulation of motivation and action through goal systems. In V. Hamilton, G. H. Bower, & N. H. Frijda (Eds.). *Cognitive perspectives on emotion and motivation* (pp. 37–61). Dordrecht: Kluwer Academic.

Bateson, J. E. G., & Hoffman, K. D. (1999). *Managing services marketing. Text and readings* (4th ed.). Orlando: The Dryden Press.

Beach, L. R. (1990). *Image theory: Decision making in personal and organizational contexts.* Chichester: Wiley.

Benlian, A., Koufaris, M., & Hess, T. (2011). Service quality in software-as-a-service: Developing the SaaS-Qual measure and examining its role in usage continuance. *Journal of Management Information Systems, 28*(3), 85–126.

Bettman, J. R. (1979). *An information processing theory of consumer choice.* Reading, MA: Addison-Wesley.

Beverland, M., & Lockshin, L. (2003). A longitudinal study of customers' desired value change in business-to-business markets. *Industrial Marketing Management, 32*, 653–666.

Bharti, K., Agrawal, R., & Sharma, V. (2015). Value co-creation: Literature review and proposed conceptual framework. *International Journal of Market Research, 57*(4), 571–603.

Bonney, F. L., & Williams, B. C. (2009). From products to solutions: The role of sales-person opportunity recognition. *European Journal of Marketing, 43*(7/8), 1032–1052.

Bruns, K., & Jacob, F. (2016). Value-in-use: Antecedents, dimensions, and consequences. *Marketing ZFP – Journal of Research and Management, 38*(3), 135–149.

Cadwallader, S., Jarvis, C. B., Bitner, M. J., & Ostrom, A. (2010). Frontline employee motivation to participate in service innovation implementation. *Journal of the Academy of Marketing Science, 38*(2), 219–239.

Day, G. S. (2004). Commentary on 'evolving to a new dominant logic for marketing' *Journal of Marketing, 68*(1), 18–27.

Eggert, A., & Helm, S. (2003). Exploring the impact of relationship transparency on business relationships. A cross-sectional study among purchasing managers in Germany. *Industrial Marketing Management, 32*, 101–108.

Eggert, A., Kleinaltenkamp, M., & Kashyap, V. (2019). Mapping value in business markets: An integrative framework. *Industrial Marketing Management, 79*, 13–20.

Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal, 50*(1), 25–32.

Engwall, M., & Jerbrant, A. (2002). The resource allocation syndrome: The prime challenge of multi-project management? *International Journal of Project Management, 21*, 403–409.

Filip, A. (2013). Complaint management: A customer satisfaction learning process. *Procedia – Social and Behavioral Sciences, 93*, 271–275.

Flint, D. J., Woodruff, R. B., & Gardial, S. F. (2002). Exploring the phenomenon of customers' desired value change in a business-to-business context. *Journal of Marketing, 66*(4), 102–117.

Friend, S. B., & Malshe, A. (2016). Key skills for crafting customer solutions within an ecosystem: A theories-in-use perspective. *Journal of Service Research, 19*(2), 174–191.

Friend, S. B., Malshe, A., & Fisher, G. J. (2020). What drives customer re-engagement? The foundational role of the salesservice interplay in episodic value co-creation. *Industrial Marketing Management, 84*, 271–286.

Gassenheimer, J. B., Houston, F. S., & Davis, J. C. (1998). The role of economic value, social value, and perceptions of fairness in Interorganizational relationship retention decisions. *Journal of the Academy of Marketing Science, 26*(Fall), 322–337.

Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2012). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational Research Methods, 16*(1), 15–31.

Griffin, A., & Hauser, J. R. (1993). Voice of the customer. *Marketing Science, 12*(1), 1–124.

Gupta, B., Iyer, L. S., & Aronson, J. E. (2000). Knowledge management: Practices and challenges. *Industrial Management and Data Systems, 100*(1), 17–21.

Gutman, J., & Reynolds, T. J. (1978). An investigation of the levels of cognitive abstraction utilized by consumers in product differentiation. In J. Eighmey (Ed.). *Attitude research under the sun.* Chicago: American Marketing Association.

Helander, A., & Möller, K. (2008). How to become solution provider: System supplier's strategic tools. *Journal of Business-to-Business Marketing, 15*(3), 247–289.

Hinterhuber, A. (2017). Value quantification capabilities in industrial markets. *Journal of Business Research, 76*, 163–178.

Hochstein, B., Rangarajan, D., Mehta, N., & Kocher, D. (2020). An industry/ academic perspective on customer success management. *Journal of Service Research, 23*(1), 3–7.

Imai, M. (1986). *Kaizen: The key of Japanese success.* New York, NY: Random House.

Kaulio, M. A. (1998). Customer, consumer and user involvement in product development: A framework and a review of selected methods. *Total Quality Management, 9*(1), 141–149.

Kindström, D., & Kowalkowski, C. (2009). Development of industrial service offerings: A process framework. *Journal of Service Management, 20*(2), 156–172.

Kleinaltenkamp, M., Plewa, C., Gudergan, S., Karpen, I., & Chen, T. (2017). Usage center – value cocreation in multi-actor usage processes. *Journal of Service Theory and Practice, 27*(4), 721–737.

Kowalkowski, C., Windahl, C., Kindström, D., & Gebauer, H. (2015). What service transition? Rethinking established assumptions about manufacturers' service-led growth strategies. *Industrial Marketing Management, 45*, 59–69.

Lemke, F., Clark, M., & Wilson, H. (2011). Customer experience quality: An exploration in business and consumer contexts using repertory grid technique. *Journal of the Academy of Marketing Science, 39*(6), 846–869.

Macdonald, E. K., Kleinaltenkamp, M., & Wilson, H. N. (2016). How business customers judge solutions: Solution quality and value in use. *Journal of Marketing, 80*(3), 96–120.
Macdonald, E. K., Wilson, H., Martinez, V., & Toossi, A. (2011). Assessing value-in-use: A conceptual framework and exploratory study. *Industrial Marketing Management, 40*, 671–682.
Malshe, A., & Friend, S. B. (2018). Initiating value co-creation: Dealing with non-receptive customers. *Journal of the Academy of Marketing Science, 46*(5), 895–920.
Maskell, P., Bathelt, H., & Malmberg, A. (2006). Building global knowledge pipelines: The role of temporary clusters. *European Planning Studies, 1*(8), 997–1013.
Mason, M. (2010). Sample size and saturation in PhD studies using qualitative data. *Forum: Qualitative Social Research, 11*(3) Article 8.
Negash, S., Ryan, T., & Igbaria, M. (2003). Quality and effectiveness in web-based customer support systems. *Information & Management, 40*, 757–768.
Nordin, F., & Kowalkowski, C. (2010). Solutions offerings: A critical review and reconceptualization. *Journal of Service Management, 21*(4), 441–459.
Nunnally, J. C. (1978). *Psychometric theory*. New York: McGraw-Hill Publishing Company.
Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). Thousand Oaks, CA, US: Sage Publications, Inc.
Prahalad, C. K., & Ramaswamy, V. (2000). Co-opting customer competence. *Harvard Business Review*(January-February) 2000.
Qu, S. Q., & Dumay, J. (2011). The qualitative research interview. *Qualitative Research in Management & Accounting, 8*(3), 238–264.
Raddats, C., Kowalkowski, C., Benedettini, O., Burton, J., & Gebauer, H. (2019). Servitization: A contemporary thematic review of four major research streams. *Industrial Marketing Management, 83*, 207–223.
Ranjan, K. R., & Read, S. (2016). Value co-creation: Concept and measurement. *Journal of the Academy of Marketing Science, 44*, 290–315.
Reichheld, F. (1996). Learning from customer defections. *Harvard Business Review, 74*(2), 56–70.
Rugg, G. E. M., Mahmood, A., Rehman, N., Andrews, S., & Davies, S. (2002). Eliciting information about organizational culture via laddering. *Information Systems Journal, 12*, 215–229.
Rust, R. T., & Cooil, B. (1994). Reliability measures for qualitative data: Theory and implications. *Journal of Marketing Research, 31*, 1–14.
Selnes, F. (1996). Antecedents and consequences of trust and satisfaction in buyer-seller relationships. *European Journal of Marketing, 32*(3/4), 305–322.
Storbacka, K. (2011). A solution business model: Capabilities and management practices for integrated solutions. *Industrial Marketing Management, 40*, 699–711.
Storbacka, K., & Nenonen, S. (2009). Customer relationships and the heterogeneity of firm performance. *Journal of Business and Industrial Marketing, 24*(5/6), 360–372.
Terho, H., Haas, A., Eggert, A., & Ulaga, W. (2012). It's almost like taking the sales out of selling – Towards a conceptualization of value-based selling in business markets. *Industrial Marketing Management, 41*, 174–185.
Töytäri, P., Alejandro, T. B., Parvinen, P., Ollila, I., & Rosendahl, N. (2011). Bridging the theory to application gap in value-based selling. *Journal of Business & Industrial Marketing, 26*(7), 493–502.
Töytäri, P., & Rajala, R. (2015). Value-based selling: An organizational capability perspective. *Industrial Marketing Management, 45*, 101–112.
Tuli, K. R., Kohli, A. K., & Bharadwaj, S. G. (2007). Rethinking customer solutions: From product bundles to relational processes. *Journal of Marketing, 71*, 1–17.
Ulaga, W., & Reinartz, W. (2011). Hybrid offerings: How manufacturing firms combine goods and services successfully. *Journal of Marketing, 75*(6), 5–23.
Vargo, S. L., & Lusch, R. F. (2008). Service-dominant logic: Continuing the evolution. *Journal of the Academy of Marketing Science, 36*(1), 1–10.
Vargo, S. L., & Lusch, R. F. (2016). Institutions and axioms: An extension and update of service-dominant logic. *Journal of the Academy of Marketing Science, 44*, 5–23.
Webster, F. E., & Wind, Y. (1972). A general model for understanding organizational buying behavior. *Journal of Marketing, 36*(2), 12–19.
Woodruff, R. B. (1997). Customer value: The next source for competitive advantage. *Journal of the Academy of Marketing Science, 25*(2), 139–153.
Worm, S., Bharadwaj, S. G., Ulaga, W., & Reinartz, W. J. (2017). When and why do customer solutions pay off in business markets? *Journal of the Academy of Marketing Science, 45*, 490–512.
Zeithaml, V. A., Jaworski, B. J., Kohli, A. K., Tuli, K. R., Ulaga, W., & Zaltman, G. (2020). A theories-in-use approach to building marketing theory. *Journal of Marketing, 84*(1), 32–51.
Zoltners, A. A., Sinha, P. K., & Lorimer, S. E. (2019). What is a customer success manager? *Harvard Business Review, 18*(November), 2019.