

## **Customer perceived value – a key in marketing of integrated solutions**

### **Abstract**

Value creation and value perception are essential concepts for a marketer – if you understand what kind of value should be created for the customer, you have an edge over your competitors. The customer perceived value is not, however, an easy task to understand. It is especially complicated in case of integrated solutions, which are usually highly complex entities for customer to buy. In this paper, we examine the marketing of integrated solutions where high technology components play a key role, paying special attention to customer value perception. In the paper, we argue that the understanding of customer value perception is remarkable in high technology business-to-business context and the best way to get a hold of it is through effective relationship management. We base our argumentation on an empirical case study of a company producing complex integrated solutions for their industrial customers.

**Keywords:** value creation, value perception, integrated solution, high technology, business-to-business, case study

## **Introduction**

The foundations of successful marketing and sales of integrated solutions lay on deep understanding of how to create value for the customer and help the customer to achieve its goals (McDonald & Woodburn 2007, Ulaga & Chacour 2001). It is not enough to just to know the customer's current and explicit needs; the secret is in identifying also the hidden and future-oriented needs of the customer. This requires the understanding of value perception.

It can be further argued that value perception is consisted of several things, including also the experienced emotional elements (Boedeker & Helander 2014) that are usually more acknowledged in consumer marketing than in the business-to-business marketing. The idea of rational buying behaviour seems to be more tightly associated with business-to-business purchasing situations (Lyly-Yrjänäinen et al. 2009), and that rationality does not leave room for the emotional "wow" experiences. However, also in the business-to-business context the decisions are in the end made by individuals. Our hypothesis is that when the complexity of the purchased items increases, the role of emotions and intuition also start to play bigger role in the purchasing situation. This is especially the case in the context of integrated solutions, where the purchaser needs to evaluate a mix of goods and services, and the overall benefits and costs of the integrated solution (Davies, Brady & Hobday 2006).

For example, it is not easy for a marketer to recognize which are the elements in the total offering that act as the competitive edge and as the key source of value creation. Furthermore, a complex integrated solution can not usually be developed and produced by a single

company, instead, the system integrator needs to be surrounded by a network of suppliers participating in the creation of the integrated solution (Helander 2004). However, to date little has been written about the role of the supplier organizations, networks and the implications that their participation has on the customer's overall value perception (Brady et al. 2005). The aim of this paper is to contribute to this gap. Our special emphasis is on integrated solutions, where the complexity of the offering sets several kinds of challenges for marketing (Davies et al. 2006).

We have conducted a qualitative case study in order to empirically examine the problematic of marketing integrated solutions. Our case study is from the industrial automation sector, describing the challenges of developing integrated solutions that are a mix of hardware components, software and services. The case thus represents a high technology context with complex total offering. As already been identified in integrated solutions literature, increased intelligence in system solutions enables a continuous optimization of customer operations, for example the integration of software to devices and systems makes it possible to improve performance without replacing physical components (Windahl et al. 2004). However, this new role of software as a highly abstract and intangible element may also raise new kinds of challenges both for the marketer and the customer.

The remaining part of the paper is organized in the following way: in the next section we briefly describe the theoretical foundations of our study. Here we build on value creation and integrated solution literature. Then we report our research methods and the case study. Finally, we draw conclusions, and discuss implications.

## **Theoretical foundation: value and integrated solutions**

Value is a concept that is commonly used by both academics and actors in the field, but it is often rather unclear what is actually meant by it in different contexts (Bourguignon 2005, Ulaga & Chacour 2001, Ford & McDowell 1999). Bowman & Ambrosini (2000) argue that the definition of value is especially unclear in strategic level. In order to understand value in strategy better, they make a division between use value and exchange value, as well as between value creation and capture. Use value is subjectively assessed by customers whereas exchange value is only realized at the point of sale. These relate both to value creation, whereas value capture is determined by the perceived power relationships between buyers and sellers according to Bowman & Ambrosini (2000). In the current study, we emphasize the viewpoint of value creation, but also the viewpoint of value perception i.e. the customer's viewpoint.

Another important distinction that has been made within the value creation literature is the division between value creation processes and value outcomes (Gummerus 2013). When focusing on the value creation process perspective, it is important to understand that the process of value creation will differ based on whether value is created by an individual, an organization, or society (Lepak et al. 2007). In the current study, the level of organization is emphasized as we study the phenomenon in the context of industrial markets. However, even though the customer is an organization, there are always individual employees that make the purchasing decisions and utilize the purchased solution. Thus, also the level of individuals is present in the study.

To build an analytical tool to carry out the empirical study, we will elaborate the concept of value through highlighting three interrelated and supplementary views: the content, process, and context views (Helander 2004). These three angles are used to clarify the rather imprecise discussion surrounding value as a concept.

The content view to value perception emphasizes that value should be measured as the trade-off between benefits and sacrifices that are not only monetary but also non-monetary. In fact, from a rather broad perspective, the concept of value can be regarded as the trade-off between benefits and sacrifices, as has been identified in the literature already years ago (Walter, Ritter & Gemunden 2001, Lapierre 2000, Parolini 1999, Slater 1997, Berry & Yadav 1996, Ravald & Grönroos 1996). These benefits and sacrifices can be understood in monetary terms, but they can also be seen as including non-monetary rewards, such as competence, market position, and social rewards (Walter et al. 2001). Non-monetary costs can include, e.g., time, effort, energy, and conflict invested by the customer to obtain the product or service. In this study, value is understood in both monetary and non-monetary terms. Nevertheless, it can still be argued that defining value as the trade-off between benefits and sacrifices offers a content-based view of value as a concept – emphasis is placed on what the customer understands and feels, i.e. perceives, to be the benefits and sacrifices. In this way, the customer itself defines the content of the value under consideration.

The process view emphasizes that value is not merely tied to the actual object of exchange, such as e.g. an automated robot; instead it is dependent on the successfulness of the whole relationship between the customer and the supplier. Thus this view underscores the

importance of understanding value creation as a process during which the customer and supplier interact. During the interaction, the goods and related services are exchanged, but also a great deal of interaction occurs between the parties influencing how the customer perceives the total value gained.

The context view, for its part, puts forward the notion of differential value: the supplier should be able to create more value than the customer could achieve by choosing some other solution created by another, competitive supplier or by the customer itself. According to Parolini (1999), differential value is very hard to define and measure, because the expectations of the customers are based on the alternatives available on the market; i.e., the impact of similar or substitute products is remarkable. Thus, measuring of differential value always requires also a mapping of other potential solutions and comparison of those with the one under consideration. In the context of integrated solutions this is not, however, an easy task.

As Parolini (1999) has stated, the possibility a false perception of value is more likely when there is presence of intangible elements and services; systemic and complex goods; benefits that are not immediate; post-purchase costs and costs of consumables; products and services that are new to the customer; and lastly, infrequently purchased goods. Most of these characteristics are present in marketing and sales of integrated solutions (Brady et al. 2005). For this reason it can be argued that integrated solutions are not easily evaluated by the customer in the purchasing situation. As there are so much of complexity related to the object of exchange, the integrated solution itself, it can be argued that the customer sets more weight in the evaluation on the process view of value.

## Research methods and introduction of case study

We have conducted a qualitative study in order to empirically examine the value perception in a real-life industrial setting. We use a case study, as it is a good method when new perspectives are sought or when there is little knowledge available about the phenomenon under study (Eisenhardt 1989, Patton 1987). We have examined three deliveries of integrated solutions through the viewpoints of the case company (that is the solution integrator), the customers of the deliveries and the suppliers participating in producing the deliveries.

A case study is also a very suitable research strategy when the focus is on a phenomenon in its real-life context (Yin 1994) as it is here with integrated solutions marketing. As typical for qualitative study (Myers 2009, Eriksson & Kovalainen 2008), the main source for our empirical data has been interviews that are thematic in nature. In Table 1. these interviews are presented.

**Table 1. Empirical data.**

<b>Companies</b>	<b>Interviewees</b>
Seller interviews (6)	1) Marketing Communications Manager 2) Regional Manager 3) Key Account Manager 4) Product Group Manager 5) Project Manager 6) Product Group Manager
Customer interviews (5) - three different customer deliveries A, B, C - within customer delivery B, two different business units participated in the delivery	1) Customer A: Production Manager 2) Customer B/Business Unit 1: Application Specialist 3) Customer B/Business Unit 1: Release Manager 4) Customer B/Business Unit 2: Project Manager 5) Customer C: Project Manager
Supplier interviews (3) - two different supplier companies	1) Subcontractor A: Project Manager 2) Subcontractor B: Manager & Founder 3) Subcontractor B: Manager & Founder

Our case company is a high-tech company that operates in the industrial automation sector. It provides its organisational customers larger automated production lines based on integration of software programs into electromechanical components; i.e. their offer is a mix of software and hardware. However, the case company has not always been a system integrator providing total system solutions. Rather, it started as a pure device supplier, but in recent years it has started to move toward providing entire system solutions, automated production lines.

The shift from device supplier toward system provider has not been easy, as the employees of the company have not always understood the different business logic that is required in order to be a genuine system provider instead of a device supplier. This lack of knowledge has been causing several problems not only in the company's customer relationships but also in supplier relationships. Moreover, the transformation has complicated the understanding of what kind of value the company is in fact providing to its customers.

### **Empirical findings**

The aim of automated production lines delivered by the case company was to create value for the customer by providing more efficient and effective production capabilities. Since the case company's customers, mainly from the telecommunications sector, were engaged in tough competition, production capabilities played a very important role in the company's business processes as a whole. Moreover, the customers placed a greater value on production capabilities that enable flexible production processes by providing the possibility of using a single production line for both mass production and production of customised products. Since



a single production line was capable to produce different product variations the customers saved both in production line investments and in floor space plus attained shorter production times. This kind of flexibility of a production line required extensive software solutions, thus the role of software was essential in the overall integrated solution.

Most of the benefits of 'more effective production' were straight forward to measure in monetary terms. However, some potential benefits were hidden and challenging to predict, since the realisation of the benefit was not immediate. For example, the benefit of the component-level tracking which was available feature in the integrated solution will not be realized until there is a case of a failure in customer's end products.

The case company was able to communicate the general level benefits for the customer, but somehow they missed the opportunities to create customer specific value. In some occasion the marketing and sales people did not realize the potential value creating features, such as component level tracking, of then-current version of its integrated solution. Such problems identifying the things that customers really value are of course related to the nature of the relationship, the lack of closeness, and also problems in sharing of information between the parties in the relationship.

The customers were waiting for the case company to take a more active role in the marketing and after-sales of the integrated solutions. For example, customers expected more proactive marketing related to the integrated solution and especially its software solution. However, the case company was not active even in contacting those customers to whom they had already delivered an earlier version of the system solution. One reason behind this silence could be

that some customer deliveries had been so difficult from the viewpoint of the case company that the personnel were a little bit cautious about getting in touch with the customer again.

In addition to direct value in the form of more effective and efficient production, the customers expected also indirect value in the form of consistent and clear service. They especially would have liked to have interaction only with the case company, from whom they had thought to have a turn-to-key solution. Instead, several persons from different suppliers were dealing with the matters at the customer's premises. These issues should have been dealt by the case company itself. Thus, the case company was not able to orchestrate its supplier network. Because of this the customers felt disappointed and were troubled by the fact that they did not always know who to contact if problems arise with the production line.

Customers were also dissatisfied with the unclear pricing – in the first place salespersons had promised software upgrades at too low a price, and afterwards they tried to ask more money from the customers when they got feedback from the persons responsible for the software. It seemed that neither the salespersons nor the customers understood the importance and the value of intangible software in the integrated solutions. Everybody seemed to value only physical and tangible equipment. This became evident when the customers wanted to have separate prices for different parts of the integrated solution, but for the software part, they were ready to pay almost nothing.

## Conclusions

From our case study we can draw up several viewpoints on the marketing of integrated solutions. In next, we will open up these viewpoints and also discuss some of the potential future research needs that we have been able to identify.

As regards the process perspective on value perception, the biggest shortcomings were in the software integration and overall project management phases in our case study. It seems that the separate functions (R&D, marketing, sales and top management) of the case organization did not understand each other well enough. Because of this the role of software was not properly understood. Probably a deep understanding of the customers and their value perception within the case organization would have solved this internal problem. From the marketing point of this internal myopia (Lewitt, 1960) of software is interesting. According to Lewitt (1960) engineers and R&D people look on the mirror and see only their own technology while marketing people watch through a window and thus, see the needs even hidden ones of the customer. In our case it seems that neither marketing, sales nor top management saw the potential of software in value creation.

From the viewpoint of the customers, the most problematic matters were the information sharing and forced interaction with several actors, as their desire was to just interact with the case company. This shows us the importance of the well performing relationship management and the well working customer interface (Araujo et al. 1999). A well working interface also facilitates the process of value creation. Customers value the easiness of just interacting with one company. Thus a poorly managed supplier network may cause dramatic decrease in the

customer value perception, even though the object of exchange would be of good quality. The process and the interaction around the actual delivery of the integrated solution is thus the key to the overall value perception.

When looking the value perception from the context viewpoint, differential value plays is a key issue, too. In the case of complex integrated solutions it becomes rather difficult for customers to compare alternative solutions and distinguish among them. In such cases, the ability to identify (that is the sixth sense) indirect indicators of the value creation capability of the case company would have played an important role. For example, acting as indicators of the value creation capability of the case company are not only the previous relationship history shared by the case company and the customer but also the reference projects of the case company.

Nevertheless, if the case company wants to succeed in future, it needs to pay more attention on such things as its project management competencies and the ability to handle responsibilities and risks. Moreover, it becomes a matter of reputation and trustworthiness; the case company should convince the customer of its value creation capabilities and competencies.

These viewpoints of capabilities of the suppliers are interesting avenue for future research to open in more detail. We will continue this study by going into more detailed to the discussion of supplier value creation capabilities. Another interesting direction for further research is to take a closer look on the issue of customer experience and “WOW” feelings also in the context of industrial markets.

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