Creating Business Offerings

- The Case of Integrated Solutions in Manufacturing Firms -

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Abstract:

Relationships have been discussed thoroughly in interorganizational relationship theories. However, little has been done to study the object of this interaction, that is, how the business to business offering is designed in regard to the reality in which the company exists. By providing Integrated Solutions, the increased overall responsibility over a function leads to a higher risk-taking for the supplier. The challenge is to succeed in creating a new offering that increases customer value instead of charging the customer for the risk taking. Well-managed customer relationships are a critical factor in the creation of Integrated Solutions offerings. They proved to add customer value by bringing an opportunity to deepen cooperation, identify elements delivering benefits, and changing sacrifices into benefits. In this regard, offerings of integrated solutions facilitate a shift from charging for service to sharing profits with customers resulting from a more efficient running.

Keywords: Integrated solutions, Offerings, Value, Relationships, Outsourcing.

Introduction

The subject of business offerings has received limited attention by theoreticians (Hedman and Kalling 2002). The authors of this paper argue that, when studying supplier-buyer interactions, relationships have been discussed thoroughly in interorganizational relationship theories. However, surprisingly little has been done to study the object of this interaction, that is, how the business to business offering is designed in regard to the reality in which the company exists.

A special form of offering is called integrated solutions, an offering that allows manufacturing firms to add customer value by including sophisticated services and know-how in a customer specific solution. Customers of capital equipment need an array of services for continued operations of the product. Integrated solutions suppliers provide them with hat throughout the product's life-cycle, from development and design, to systems integration, operations and decommissioning (Davies, Brady and Tang 2003). The services included in the offering are not only traditional maintenance and repairs. New capabilities are required for the integrated solutions supplier such as systems integration, operational services, business consulting and financing capabilities (Davies 2001).

The aim of this article is 1) to create a framework from which specific integrated solutions offerings can be analyzed and 2) to better understand value creation in integrated solutions offerings.

The first chapter presents a theoretical overview relating different aspects that create value for customers and suppliers. The chapter ends with a framework for analyzing empirical data. Next, two case studies are presented. Alstom Power is a manufacturer of gas turbines and is expanding in the after-sales market by delivering integrated solutions. ABB FM supplies climate control system. The cases are analyzed and conclusions about the creation of value-adding integrated solutions offerings are drawn.

Integrated Solutions as Business Offerings

This chapter will provide a framework for analyzing empirical data and understanding the design of value-adding offerings of Integrated Solutions.

Integrated solutions: their strategic aspects

Integrated solutions is a very similar concept to the one of full-service from Stremersch, Wuyts and Frambach (2001) that define Full-Service as "comprehensive *bundles* of products and/or services, that fully satisfy the needs and wants of a customer related to a specific event or problem." Both concepts take their birth in a strategy of extension in customer needs and the bundling of an offer as the implementation of this strategy. Stremersch and Tellis (2002) blur the limit between bundling and integration by defining product bundling as "the integration and the sale of two or more products or services at any price". With the origin in the definition of integral architecture of Ulrich and Eppinger (1995), the authors illustrate integration as the gathering together of different products and their functions into one product, leaving finally only one interface between the customer and the product. Hence, value is created through a new function or better existing functions. As for the bundling of services, value creation starts by rethinking and maybe redesigning the whole supply chain from the definition of the services to their delivery. It is a long-term differentiation strategy (Stremersch and Tellis 2002).

The definition of offering has not reached a consensus among authors yet. For Normann and Ramirez (1993) the offering is the result of a firm's activity in form of products or services. Apart from the product and the service component, price and/or cost is another element in the definition of Hedman & Kalling (2002). Kaplan & Norton (2000) call it customer value proposition, which includes a product and/or services as well as corporate image and customer relationship. Amit & Zott' s (2001) transaction content fulfills an equivalent function. It comprehends goods, information, resources and capabilities required by the supplier to enable the exchange. Dubbosson-Torbay, Osterwalder and Pigneur (2002) opt for value proposition, a mix of product and/or services of value for the customer. The common denominators of these definitions stem from the insight into the need to create value for customers through the product and/or services offered.

Two majors points result from the definition of bundling. The first one is that value is delivered through products and/or services bundled together in the offering. Second, the creation of value implies that suppliers understand not only customers' business but also their specific needs. (Filiatrault and Lapierre 1997) Consequently, suppliers and customers have to go beyond a discussion based on products and services in order to reveal what customers need. Indeed, the needs of the customer company will guide the degree, type and purpose of the services contracted.

As stated above, products and services bring value to the customers. This product/service value is embodied by different means. Bundling is one of the strategies to create value that suppliers can resort to. Traditionally, academicians classify value creation into either *differentiation* or *low cost* of products and/or services (Hedman and Kalling 2001; Dubbosson-Torbay, Osterwalder and Pigneur 2002.).

Kaplan and Norton (2000), distinguish three types of differentiators: *operational excellence*, *customer intimacy* and *product leadership*. They underline that most companies concentrate on one of the differentiators while maintaining a satisfying level in the two other ones. Competitive pricing, product quality and selection, speedy order fulfillment, and on-time delivery are the goals of operational excellence. With customer intimacy the authors relate to questions as quality of the relationship with customers, exceptional service and completeness of the solutions offered. Finally, product leadership focuses on functionality, features, and overall performance of the products and services.

According to the definition of integrated solutions, exceptional service and completeness of the solutions are two fundamental goals. In order to achieve these, good relationships are a prerequisite (see Davies 2001; Windahl et al. 2004). Therefore, we can identify customer intimacy as central to integrated solutions. As Kaplan and Norton suggest, the two other types of differentiators are necessary to deliver value to the customer but need not to be prioritized. In this case, a solution is complete only if it provides what customers expect, that is appropriate functionality and features (product leadership) on time and to a competitive price (operational excellence).

Quality is a prerequisite for value creation (Kotler 1997). Should a product or a service be deprived of quality, it would have no value, may it be costless. (Anderson and Narus, 1998).

For Kotler (1997), "quality is the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs". Kotler distinguishes two types of quality: performance and conformance quality. Performance quality relates to the performance of the product (For instance a Mercedes has better performance than a Hyundai). Conformance quality reflects the supplier's ability to deliver to the customer what was promised (Both cars conform to the promises made). Kotler's definitions of quality are product oriented. Furthermore, the definition of conformance quality is not customer centric. It would be more relevant to name how effectively products and services match customer requirements.

In order to negotiate the scope of the contract, suppliers have to understand its *context* and *strategic implications* for the customers. Hence, finding out the reasons why customers need to contract out is a crucial step (Corbett 1996). Fine and Whitney (1999) classify these reasons in two categories, either the buyer outsources for *capacity or knowledge* reasons. When the buyer is motivated by capacity reasons, he/she looks for manufacturing competitiveness, for example a supplier that can provide a product or service in a more efficient way (quicker delivery, lower cost), or for saving resources in terms of space or management attention and time. When the lack of knowledge is the reason for outsourcing, the buyer has neither the capability to produce in-house nor to easily acquire what is needed to produce in-house. Therefore it has to turn towards a supplier that will provide this capability, for instance, a technology or a quality improvement (Arnold 2000).

Negotiating contradictory interests

Henceforth, negotiations between supplier and customer will center on issues of *control and security for the buyer and independence and incentive for the supplier* (Quinn and Hilmer 1994). Aspects as knowledge (control of quality, design, and technology) and responsibility (equipment used by the supplier, financial viability) are discussed (Quinn and Hilmer 1994). Outsourcing contracts that are most successful when customers, despite their wish to keep control, focus to set the goals achievements in terms of "what" has to be achieved. "What" refers to the goals in terms of productivity or cost reduction for instance. On the other side, suppliers try to meet the goals by managing the "how" of these goals (Quinn 1999). The "how" is the processes, innovations and other methods employed by the supplier to reach the goals set by the customer. In order to ensure that the goals are met, customers will tend to use control and achieve security in the process. Meanwhile, suppliers will try to protect their

independence in the process and increase their incentive for achieving goals set by the customer.

The interaction between supplier and customer is not limited to only create customer value. Indeed, customers have to "pay" for the value received, which is the base for all exchanges. Customer value can be depicted as a difference between *benefits and sacrifices* (Flint, Woodruff and Fisher Gardial 2002). Customer value is positive only if the worth of the benefits all together exceeds the cost of the sacrifices. However it is important not to forget the supplier's benefits and sacrifices either. Anderson and Narus (1998) stress the risk for value drains, which are customer benefits that are too expensive for the supplier to produce and have no strategic importance for the customer: "A company's ability to manage flexible market offerings successfully rests on its understanding of the value each component of an offering creates as well as its associated cost". Therefore the offering should always be the outcome of a negotiation between benefits and sacrifices both for suppliers and customers.

Relationships as value enhancers

Many authors recognize the importance of *relationships* in industrial marketing exchanges (Filiatrault and Lapierre 1997; Sheth & Sharma 1997). Good relationships add value to the offering (Kaplan and Norton 2000). Brock Smith (1997) proposes that good relationships are tinged with open communication, trust and perceived interdependence between the parts. This supports the social embeddedness theory developed under the 90's that also recognizes trust and reciprocity norms as determining for good relations, and for added value in the basic exchange of product and services (see Johansson and Mattsson 1987; Uzzi 1997).

At the opposite, relationships tinged with power (the ability to control what the other part values) and dependency (see Emerson 1962) may affect negatively the value of the offering. This may be particularly damaging for offerings of integrated solutions where customer intimacy plays a crucial role. In this article we will base our description of relationships on the notions of open communication, trust on one hand, and on power and dependency on the other hand.

In their article on supplier relationships, Sheth and Sharma (1997) urge business customers to establish relationship with their suppliers in order to get better service and increase purchase effectiveness. Good relationships can bring value in terms of increased cost efficiency,

increased effectiveness, increased used of technology for contacts between firms and increased competitiveness by locking in good suppliers. Generally, the authors suggest that suppliers create value by letting customers access to markets, new technology and information.

An overview on creating offerings of integrated solutions

The result of the discussion above is that creating value in offering for both customers and suppliers is a prerequisite in order to reach an agreement. This value is directly linked to the content of the offering, which traditionally is described as products, services and price or in terms of benefits and sacrifices. It has to be clear that the relation between products, services and price to benefits and sacrifices is probably of a complex nature. Neither products, services nor price are completely a benefit or a sacrifice. For instance a product's productivity impact might be satisfying (benefit) while the same product is not well integrated with other systems (sacrifice).

In this context, the outcome of negotiations on contradictory interests where benefits are not obvious for both parts is crucial. The better the relation, the higher the potential is to reach a satisfying solution for the two parts. This is a process that influences the outcome of the content of the offering (see figure 1). During this negotiation process, open communication, trust and perceived interdependence are to be encouraged between the parties. In parallel, translating products and services into benefits for both parts requires a deep understanding of the reasons (the context) for which the customer is outsourcing. Customers and suppliers have to analyze whether it is for capacity or knowledge reasons and how it could bring value to the customer's business. Figure 1 illustrates the relations between the content, the process and the context of the offering as well as its outcome.

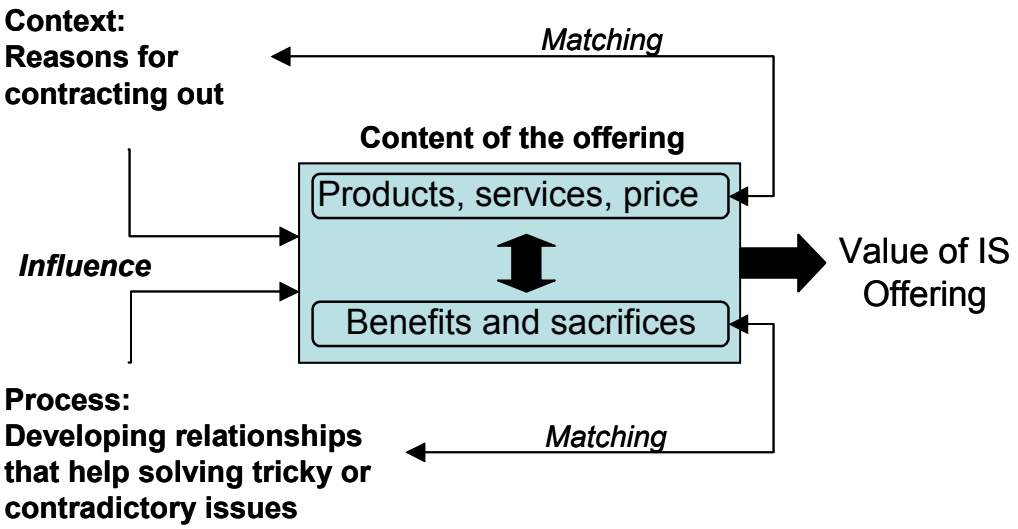

Figure 1: Creating Offerings of Integrated Solutions (Own)

The challenge of creating Offerings of Integrated Solutions is twofold. It is a matter of matching the content of the offering, products, services and price with the customer's reasons for outsourcing. At the same time, customers and suppliers must find a way of transforming contradictory issues into benefits for both parts.

Case studies

The empirical findings are mainly based on research conducted at Alstom Power, Finspång, a Swedish producer of gas and steam turbines for the generation of electricity, steam and heat. Twelve interviews were conducted during 2003. Eight Alstom employees at different levels within the organization were interviewed, e.g. account managers, business area managers and business developer. Four persons, responsible for the Alstom contract and representing one customer each, were interviewed,. Each interview lasted between 1.5 and 2 hours where the interviewees were asked open ended questions and given a chance to express their own views on the subject. The research at the company was exploratory towards the area of integrated solutions offerings. In this article, the former name of Alstom Power will still be used although Siemens had acquired parts of Alstom Power, including the facility in Finspång on 28th of April 2004.

The study of Alstom will be the focus of this article. However, the Alstom study follows an earlier study carried out in 2002 by Andersson (2002) at ABB FM, which is a supplier of climate control systems for industrial facilities. The purpose of the study was exploratory and focused on increasing understanding of the integrated solutions concept. Some of the material gathered has proven useful also within the context of the article on Alstom Power. Nine interviews were made of which three were conducted with contract handlers at current customers. Also one potential customer who was initiated in the ABB FM contractual concept was interviewed. The remaining five interviews were made within ABB. The head of ABB FM and two sales representatives were interviewed together with one area service manager and the head of an ABB sister department.

Background of the offerings at studied case companies

A new management at Alstom took the initiative to develop service offerings in 1997 in response to competitors in the marketplace. The company's customers seconded this strategic move a year later. Before that the efforts towards market leadership was technology driven rather than customer focused. However, staff within Alstom has expressed the opinion that today's offerings are still bundles rather than integrated solutions.

The second case focuses on integrated solutions offerings developed by ABB Facilities Management (FM), a service organization operating within the ABB Group. From their

experience in the installation and service of climate control systems they were able to create an offering where they could dramatically reduce energy expenditure at the customer's facilities. The idea of letting FM taking over the operation of the system originally came from an old customer, who was convinced of FM's higher efficiency compared to his. The contract on services, including financing of the installed system, was successful. According to the agreement, FM was given a percentage of the energy savings.

Service levels in Alstom's offerings

At Alstom, the physical product, i.e. the gas turbine, is sold separately from the service contract, and therefore is part of a separate contract. In this article, we focus on the service contracts.

The basic offerings propose different service levels made of an increasing number of components, thus increasing the commitment from the supplier over the delivered gas turbines. The basic service agreement offerings are depicted in figure 2.

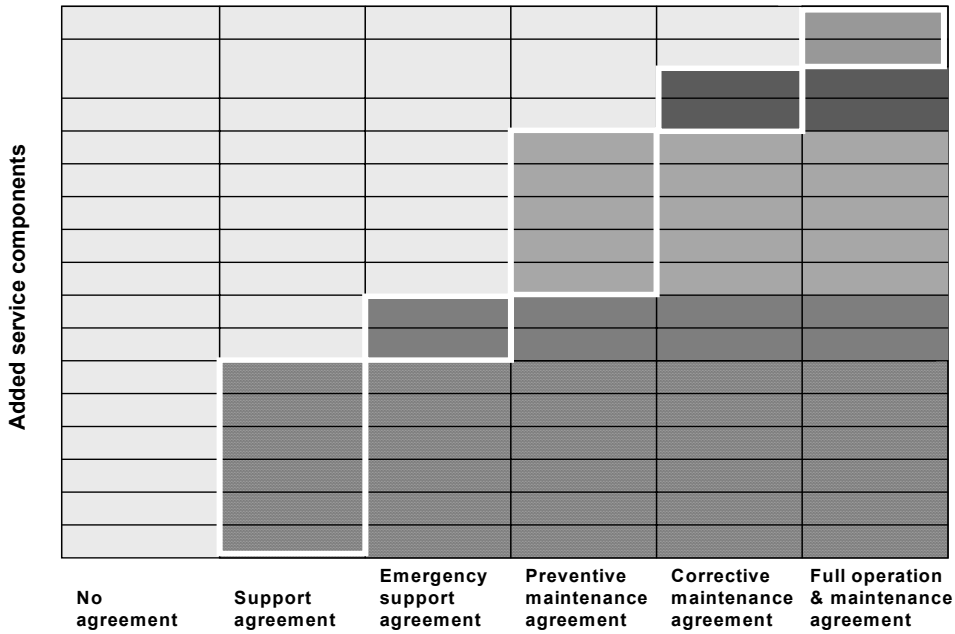

Figure 2: Alstom's service agreement offerings (Alstom presentation)

With preventive agreements Alstom commits to perform preventive maintenance actions specified in the contract for the gas turbine in question. The corrective maintenance agreement provides customers with corrective actions if the gas turbine or some of its

specified components should fail. This agreement can either include an 'incentive' or not. With an incentive, Alstom must ensure the customer of a certain operating time availability of their gas turbines. If the hours of available operating time exceed a specified level, Alstom is rewarded with a bonus, and otherwise with a fine if they fail to meet the target.

According to the definition of integrated solutions as in this article, operations and maintenance of the delivered product are included in the contract. Exceptionally, in the case of Alstom, it is only in the full operation & maintenance agreement that the gas turbines are operated and maintained by Alstom personnel.

Shared savings in the ABB FM offering

Moving on to the second case, ABB FM, the offering is divided in two main options. In the first option, FM carries out a feasibility study to evaluate the existing climate control system at the potential customer's site before contract. If energy consumption savings are possible FM may sign a deal with the customer, install new equipment and take over operations of the system. In the second contractual arrangement, FM takes over operations without performing a feasibility study and is paid a monthly fee for running the climate control system. In both cases, FM may invest and upgrade the control system to curtail energy consumption during the contract period. The savings resulting from the upgrades are shared between the partners. The customer is only obliged to pay the monthly operations fee.

In both cases, the ultimate source of success for the contractual agreements is a diminished energy cost for the customer. The better the performance of the control system, the larger the savings for the customer, and the larger the income for FM.

The pricing model for the first contract type is depicted in figure 3. The previous cost represents the customer's total cost for climate control systems before the contract with FM. This cost corresponds to energy expenditure and operations and maintenance of the climate control systems. As the contract period begins, the cost of energy expenditure is supposed to decrease, which results in savings that are symbolized by the two top areas. FM and the customer share the savings. Both the financial and technical risks are thus transferred to the climate control provider, i.e. FM. The customer is guaranteed not to exceed a cost higher than the initial one (exempt for cost increases related to changes in energy prices, taxes, etc.). After the contract period, the installed hardware is formally turned over from FM to the customer.

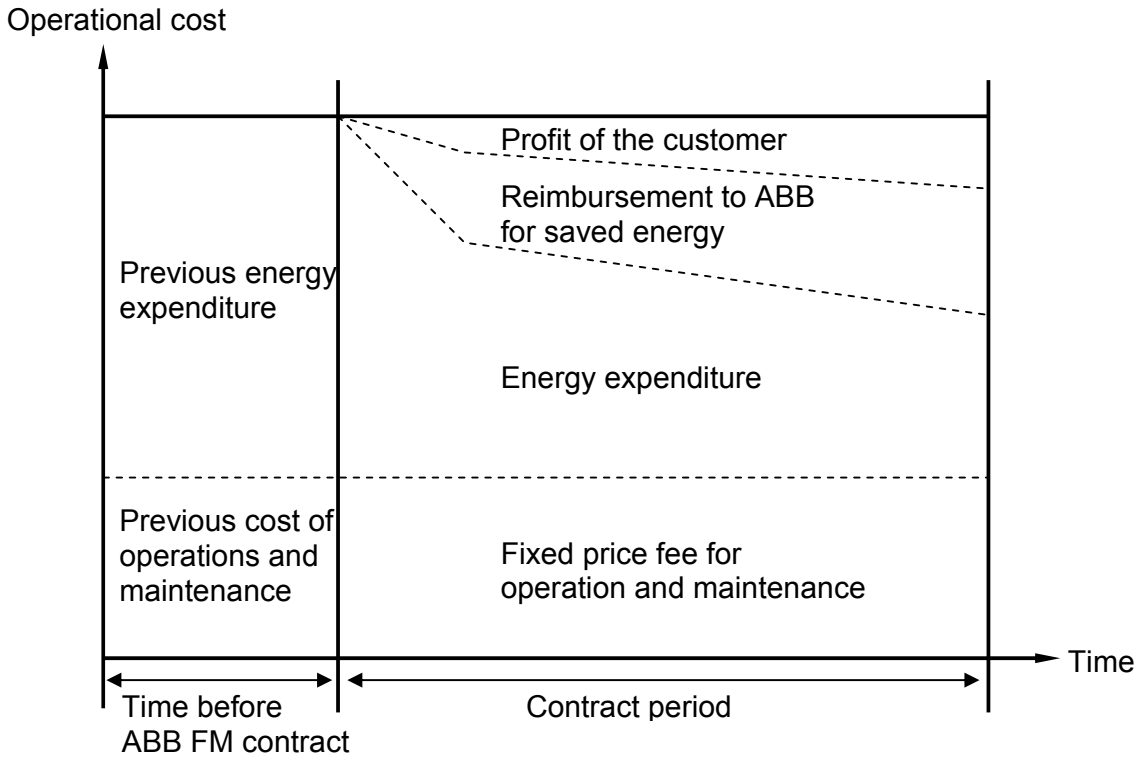

Figure 3: ABB FM's pricing model (Own development of ABB FM presentation)

Shifting focuses

Customers usually do not ask for a specific component when purchasing a new gas turbine. They rather focus on the actual availability potentials of the machines and services included in the agreement. Therefore, Alstom's service organization considers that the company should focus to provide availability to the customers. Yet, the gas turbine and its technical specifications are still considered the primary means of competition within Alstom today. Alstom's service organization suggests that increasing the up-time of the machines should be one of the goals of the product development process. Other interests as designing easy-to-maintain gas turbines and improving co-operation between research, development and service department should be pursued. Indeed, the design of the machines lays some of the foundations for which services could be included in the offerings.

Has Alstom achieved win-win situations?

At Alstom, the spare parts that are the most profitable part of the current service contracts. That means that it is the preventive agreement and agreements larger than this one that generates the most profits. If the spare parts generate the greatest profitability, why then provide them within a service contract as opposed to selling them to the customers when they need them? The answer lies with securing the order stock. For Alstom, the need for spare parts over the next ten years is mostly already accounted for and they have also guarded their sales against third-part suppliers.

For Alstom, the non-incentive contracts are more lucrative since they include a larger fixed fee. However, that is only true as long as the machine is running smoothly. In case of failure, Alstom is financially and technically responsible for the repair, which can be rather expensive. But this applies only to the two most comprehensive agreements.

Even though customers appreciate the incentive version of the Alstom agreement, the amounts saved or lost are comparatively small. Some customers enjoy an external back-up power at their facility, while others, like off-shore oil platforms, must rely on the power supplied by the gas turbine. Machine stops lead to large loss of production for the latter. customers usually either benefit of Alstom's responsibility for the failures or of an agreement with an insurance company. Some of Alstom's contracts also have a clause connected to the speed at which failures can be attended to by either sending out a service engineer or provide necessary spare parts.

Having availability guarantees do not come for free for the customer. A traditional way of pricing this increase in risk for the supplier is to add risk premium of some sort. This is still a standard within the business. However, Alstom has solved the problem differently. Now the customer must add some additional components to their service agreement. These components can be: to keep a stock of spare parts, to have quick access to special tools, to install remote monitoring systems and other such commitments that also aids the quick response of Alstom service technicians in case of machine failure. Some of the customer's personnel must also attend educational programs provided by Alstom. The additional components bring in extra profit that covers for the risks involved with leaving a guarantee. Moreover, the additional components prevent or at least mitigate the effects of a potential failure. Hence, the customer makes extra payments that limit the downtime caused by failures.

Some of Alstom's customers based their decision of outsourcing maintenance and/or operations contract on the need for technical knowledge. Typically these customers consider the power supply to be secondary to their core processes, yet they may still be vital. The only full operations and maintenance contract Alstom has signed was with a customer that did not have the necessary competence to operate a gas turbine. A few years into the contract, the customer expressed a wish to improve the company's knowledge in this area and said it would be of interest to take over the complete operations themselves, including the Alstom personnel currently operating the gas turbine site. Some customers, that do possess the knowledge, lack the resources to either operate or manage the delivered equipment. One of the customers interviewed said that the greatest benefit with an incentive contract was to improved up time on the gas turbine due to superior supplier technical knowledge and quicker access to spare parts and service personnel.

One of the interviewed customers that did not have a contract specifying Alstom to take full operational responsibility said he did not think it would be worth the cost of adding this feature in the present Alstom offering system. It would simply be too expensive and not cover the cost of damage and loss of production. The alternative he claimed is a clause obliging Alstom to be on site ready for repairs within a certain number of hours or other such obligations that would mitigate the effects of a power loss.

Varying customer views on the supplier-customer relationship

In some of Alstom's customer segments the customers are showing an increasing interest in creating long-term relationships. This shift towards customer focus has yet to take place within the Alstom organization. It is particularly evident for customers that have been provided gas turbines to power offshore oil and gas platforms. These customers cut back on the number of suppliers they deal with and try to improve on the integration with the ones that remain. It is still the customers that are the driving force for longer-term relationships. It has been recognized within Alstom that closer relationships with the customers can be beneficial in several ways, not least in the development of products, services and offering set-ups. For example, customers within the oil and gas segment have not only provided solutions when problems have occurred but even on their own accord to improve on Alstom's existing contractual set-ups.

Far from all of Alstom's customers have engaged in a service contract and for these customers Alstom has to deal with harder competition from third-party suppliers of both services and spare parts. To gain control over this sort of customers it is often vital to have well-developed personal connections with key people. Securing long-term relationships by providing well-developed service concepts have become an increasingly vital weapon for all gas turbines manufacturers. Not only has the number of third-party suppliers increased, they are also improving on the capabilities and can provide spare parts and services at low costs.

Some customers prefer to keep their independence and not tie themselves to a particular service provider, although one Alstom representative noted that this argument is being used less and less. Earlier experiences, either by the customer itself or by reference customers, are important customer drivers for signing service contracts. At the same time, experiences can work both in favor of and against the service agreement. It was a common response among the interviewed customers that Alstom had to prove that they could supply the promised functions for trust to be formed. Two of the customers even delayed the signing of the incentive agreement after a year of operations of the gas turbine.

The individual contracts set up by Alstom and their customers are adjusted from the basic offerings with some customer specific elements. During the first year of the contract it is quite common that there are some initial difficulties that may create tension between Alstom and the customer. Since this is normal, Alstom makes sure to inform the customer on these at an early stage. Yet, it may not be contractually specified how unexpected problems in the start-up stage should be handled. But interviewees expected each situation to be dealt with separately.

Discussion

The empirical data is analysed with the starting point in the theoretical framework. Our way of processing is to identify in the empirical data the different theoretical components and then compare their interactions with the ones suggested by the theoretical framework. In this way we ensure a systematic examination of the empirical data. Other information that does not fit into the theoretical framework is yet taken into account as it may be enriching and also analyzed.

Turning sacrifices into benefits

The case of ABB FM, which financed the investment of the climate control system for the customer, was successful. Indeed, in the short term, ABB FM did a financial sacrifice but in the long- term they get reimbursed for it. Furthermore, charging customers on their savings is a way to underline for customers that cost have been saved. It also proves that ABB is confident with its technology, its products and services. For customers, benefits from this deal encompass largely the sacrifices. An important lesson from this discussion is that suppliers ought to take into account the total product life cycle. Financial sacrifices at the beginning of the relationship may be worth in order to acquire new customers and it pays of in the long-term.

Why some relations are doomed from the beginning

The case of the Alstom customer who wishes to take back all the outsourced operations and maintenance of the turbines is a striking example. It stresses the importance of the context for the content. Because of his lack of knowledge on how to operate and maintain his gas turbine, the customer asked for a full contract. The value is immediate both for the supplier, who get the opportunity to sell its products and services, and for the customer, who gets the required help. However, the lack of knowledge is a dependent situation to be in. The customer realizes that the sacrifice in terms of loss of control is very risky. By getting back some of his independence, he could cause a substantial loss of value for the supplier. This case illustrates the importance of the context (reason why the customer is contracting out) for the offering (offering of integrated solutions) and the relationship (lack of perceived interdependence).

Relationships, crucial for the content of the IS offering.

The incentive contracts of Alstom are interesting as they clearly relate the supplier's performance quality of its products to benefits and sacrifices for both parts. The contract

stipulates a certain level of operating time availability for the gas turbines. If this threshold is not exceeded, both customers and suppliers are disadvantaged. The supplier pays a fine and the customer looses productivity. In the contrary case, both are rewarded. Incentive-based contracts enable the parties to experience win-win or loose-loose situations.

Several Alstom customers have waited with engaging in an incentive contract until after a trial period. This can be explained by a certain natural apprehensiveness in establishing trustful relationships. Customers, both those from Alstom and ABB FM, demand that suppliers prove themselves by fulfilling the obligations of the contract. Conformance quality is a prerequisite for trust in relationships. In this case, product performance creates value that can trigger the wish for the customer to formalize relations. Then, a contract seals the interdependence.

The cases have shown that it is often customers who are the driving force in the development of new offerings. Alstom increases knowledge on customer value by taking into account new customer propositions or changes in the offerings. These are later introduced in the basic offering concepts. In summary, in line with the theory, relationships influence the content of the offering.

Value Creation

Alstom used to protect from the risk of not fulfilling the goals of availability by forcing suppliers to sign a risk contract premium. For Alstom it was both a benefit and a sacrifice. On one hand, risks were limited, which could be perceived as a benefit. But this very benefit was done at the expense of the customer that had to pay for the deal. This deal supposed that Alstom was not confident in its ability to meet the requirements. These aspects were clearly negative and could reduce the value of the offering both for the supplier and the customer.

The solution found by Alstom turned the sacrifices into benefits for both parts. Indeed, customers are urged to increase their service level, but the rewards are worth. Customers benefit from improved up time on the gas turbine, and shorter mending time. Personnel possess higher technical knowledge, and serve the customer quicker. And last but not least, the solution secures the rapid access to spare parts. All these aspects produce direct value for the customer and the supplier.

Conclusions

The shift from thinking in terms of product, service and price into benefit and sacrifice seems to be efficient in revealing for suppliers how customers could perceive and analyze an offering. This method brings to light value aspects in the offering. Consequently, the discussion centers on how to create value (and solve problems) instead of just focusing on how to solve problems. Therefore we consider that our theoretical model appears to be satisfying concerning the content of the offering.

The analysis of the cases has shown that trustful relationships do create value for the customers and the suppliers. And therefore the relation between the process of the offering (developing relationships to solve thorny problems or contradictory interest) and the value generated by the offering should be more obvious in our model. Similarly, outsourcing out of lack of knowledge may create unbalanced relationships between customers and suppliers, which impairs the value that could be delivered in the contract. In other words, the context can influence the process, which in turn has effect on the value of the offering.

The two cases showed that transforming sacrifices into benefits can be a powerful means for the supplier. Indeed, suppliers share increasing profits resulting from diminished customer costs, or increased productivity. This creates an efficient psychological value for the customer. Instead of being charged for having problems (double penalty: loss of productivity and cost for repair), customers share the profits with the supplier that helps him/her to better the company's performance.

Apart from the links made in this article between the different parts of the offering and value, value can take on further aspects. Customers with knowledge feel more equal in a relationship. Another aspect is the dynamism of time. Both customer and supplier value varies with time. At last, although we consider that it is probably very difficult to measure value, the need for a term expressing the value created by benefits and diminished by sacrifices was present during the article. Hence, we propose "net value ".

Creating offerings of integrated solutions is first of all a challenge of transforming so many aspects of the content of the offering as possible into benefits for the customer and the supplier.

Further research

Knowledge and capacity are essential to consider when setting up the content of the integrated solutions offering. In this article, the focus has been on the customer's needs. However, also the supplier's knowledge and capacity must be taken into account when designing offerings. What they are able to do sets limits to what they can provide. The model presented in this article could be developed further and entail even more aspects influencing the design of the integrated solutions offering.

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