Role of Internet-based Technologies in Managing System Supplier-Customer Relationships

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This paper is a part of a doctoral thesis project. The purpose of the paper is to define key concepts and to give a theoretical framework in which to conduct further empirical studies.

INTRODUCTION

The management of customer relationships in the system business has attracted a great deal of interest. The extant studies, however, have mainly focused on system selling processes and/or project management (e.g. Kotsalo-Mustonen 1996), thus neglecting the customer relationship after the system installation. Potential reasons for this sales orientation have been suppliers´ trust in high switching costs for the customer (see Page & Siemplenski 1983) and the relatively high interaction costs involved in maintaining the relationship (Håkansson 1982, 163).

However, the focus of the system business is shifting from selling to long-term growth opportunities with existing customers. In many cases, a major part of the revenues come after the system installation, from consulting, system extensions, maintenance activities and value-added services. One underlying factor is the increasing role of software as a system component, needing frequent updating and adapting. Moreover, the customer acquires the system to run the business in a more profitable way, not just to solve urgent technical problems. In other words, one of the system supplier's main challenges is the capability to advise the customer so that he is able to fully utilise the benefits of the system investment.

Internet-based technologies offer many opportunities for the development of more intensive customer relationships. They lower interaction costs, provide new ways to communicate and create communities and form a new channel to sell products and services. Utilisation of these possibilities in the complex system business is, however, much more challenging than in the commodity business. The Internet may change the competitive environment and set totally new capability requirements for the system supplier.

The aim of this study is to examine the implications of Internet-based technologies for the relationship management of a system supplier. The study focuses on systems with strategic importance for the customer's business, thus excluding purely operational systems. More specifically, we are interested in *how Internet-based technologies are being utilised in system supplier-customer relationships and how they influence the competitive landscape of the system business*.

There are three secondary research questions:

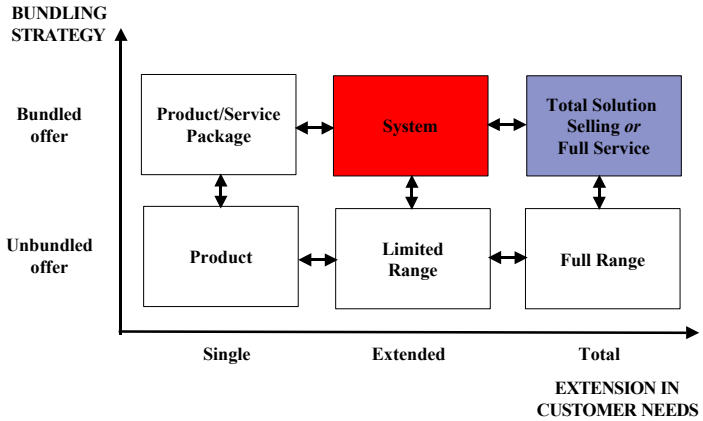
- How does the Internet change the competitive situation between full service system suppliers and subsystem/equipment suppliers?
- What are the key interaction processes in the creation of relationship value both for the system supplier and his customers, and which of these processes could be Internet-based?
- How does the Internet change the capabilities required from the full service system supplier?

THE SYSTEM BUSINESS

The system business has several typical characteristics (Kosonen 1990, 17). First of all, the system can be defined as a unique total solution to a customer's needs and problems. Second, it is about selling know-how, often an innovation, which thus requires from the system supplier good consulting skills. Third, the main idea of the system business is the sale of a positive rate of return for the customer's investment (ROI). Recently, Stremersch et al (2001) introduced a concept called "full service". In their categorisation in Figure 1, full service extends further in system selling and thus could also be called "total system selling" or "total solution selling". Interestingly, this is about the same as Kosonen's general definition for the system business.

By following the proposition of Stremersch et al, we are able to categorise system suppliers into two groups, depending to what extent customer needs are served. First, there are system suppliers (e.g. Cisco Systems) which offer the basic equipment or subsystem with a limited number of services. On the other hand, there are total solution/full service providers (e.g. Nokia) that are able to offer the whole package with different options and thus take full responsibility for the customer. In this study, we focus on "full service" system suppliers, because their role can be seen as the most demanding one.

Figure 1: Defining the concept of full service



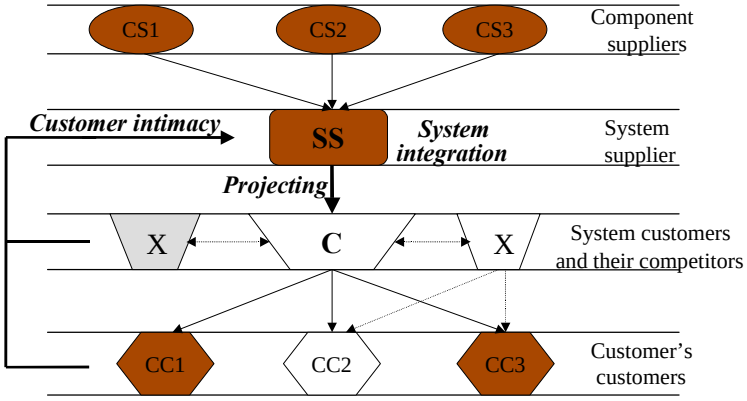
Source: Stremersch et al 2001

Capabilities of a system supplier

Based on the views of the main authors in the field (Mattsson 1975, 3-4; Page & Siemplenski 1983; Kosonen 1991, 264-265), it can be agreed that the system supplier's role has traditionally required the following key capabilities (see Figure 2):

- *Customer intimacy:* Understanding a customer's business, knowing the needs of customer's customers
- *System integration:* Top level knowledge (both technical and managerial), network management
- *Projecting:* Team selling, after-sales marketing

Figure 2: Position and key capabilities of a system supplier



Moore (1993) emphasises that the network leader should be able to provide a compelling vision for the future that encourages (component) suppliers and customers to work together to continuously improve the complete offer. The full service system suppliers can be seen as natural network leaders, because they organise the complete solution for the customer. To strengthen further their network position, the system suppliers also tend to be active in areas where they do not have their own products to offer.

But how does the Internet change the resources and capabilities required from the system supplier? Hagel and Singer (1999, 213) claimed that there would be three unbundled businesses in the future, each of them having their own experts: customer relationship management/customer intimacy, innovation management/R&D, and production/logistics. Which of them are relevant for the full service provider? Can one supplier manage all of them?

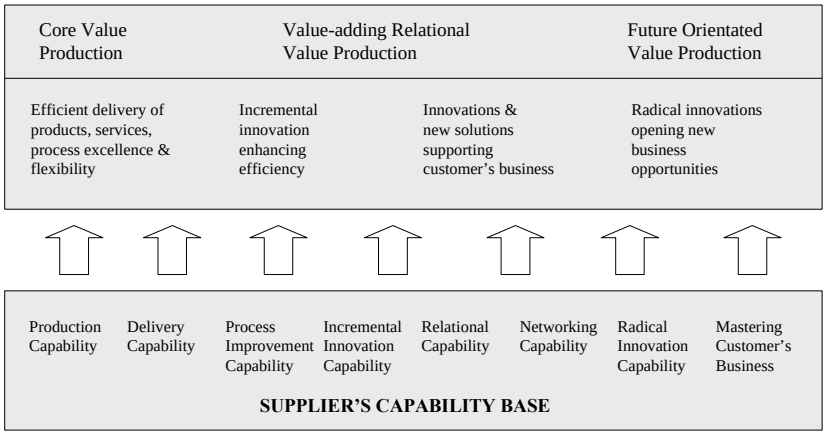
Value added of a system supplier

This study views total system selling as a way of creating relationship value, both for supplier and customer. Ford et al (1998, 113) argue that *the relationship value for the customer* is

formed by the following formula: Relationship benefits (cost benefits + revenue benefits) – Relationship costs (direct procurement costs + relationship handling costs).

In their discussion of a supplier's value creation potential, Möller and Törrönen (2000, 15) propose a continuum from core value to future orientated value production, with related capability requirements (see Figure 3). Because of the strategic importance of the system, the customer may see the future orientated value production as an essential factor in supplier evaluation. This, on the other hand, would require from the system supplier the capabilities of mastering the customer's business. Moreover, when the system is very complex, the customer may want to outsource some functions of the system to the supplier (e.g. maintenance activities). This development may require totally new capabilities from the system supplier.

Figure 3: Business supplier's value creation potential



Source: Möller & Törrönen 2000, 15

For the supplier, the value of the customer relationship can, in principle, be calculated by deducting costs incurred from the cash flow received during the customer's lifetime. Moreover, there are non-material values, including reference value, which may have a major impact on total customer value.

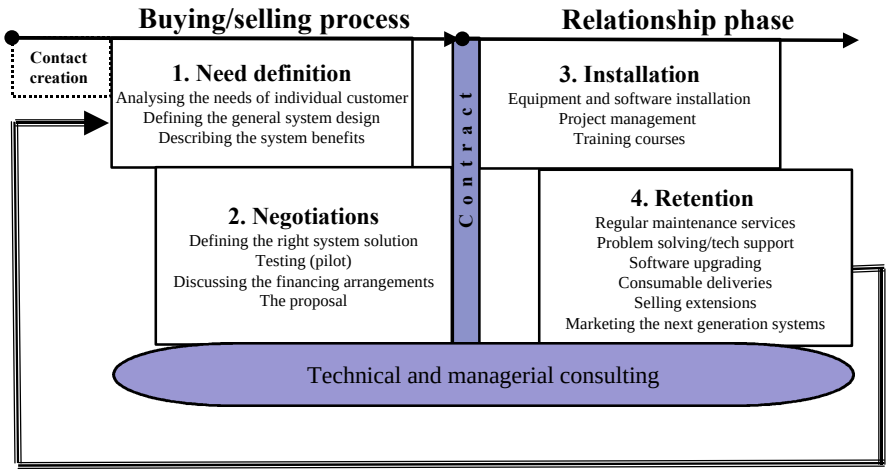
Relationship stages in the system business

From a relationship perspective, we have, in Figure 4, divided the system business into four different stages: need definition, negotiations, installation, and retention. The main customer relationship phase "retention" begins after the equipment is installed and lasts until the selling phase of the next generation system. For instance, a shift from GSM to GPRS/3G systems in mobile networks illustrates the change in system generation.

The consulting role "mastering customer's business" remains during the whole relationship. In the selling phase, the goal is to define the right system solution based on the customer's competitive strategy. In the installation phase, the organisational change and commitment

needed should be ensured, because without re-engineering/organising the system benefits cannot be achieved (see Hammer 1990). In the retention phase, the system supplier should proactively ensure that the customer is able to fully utilise the promised system benefits.

Figure 4: Relationship stages in the system business



From the perspective of customer lifetime value, the selling phase may require a lot of resources from the supplier and last a long time without any guarantee of success against the competition. On the other hand, the customer may have limited financial and human resources for a one-time investment. For these reasons, the real growth opportunities often lie in a long-term relationship with the customer, including extension and consumable sales.

ROLE OF INTERNET-BASED TECHNOLOGIES

Porter (2001) has analysed the impact of the Internet on the competitive environment. One of the major effects is that the Internet provides a direct channel for suppliers to reach end users, reducing the leverage of intervening companies. For a full service system supplier, this will provide both opportunities and threats. On the one hand, the full service system suppliers are able to reach a customer's customers/end-markets in a new promising way. On the other hand, subsystem suppliers are able to build stronger direct links than before with system customers, instead of communicating via full service suppliers.

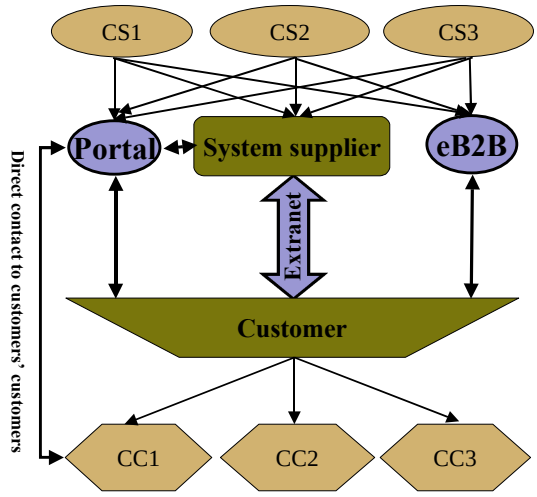
In this study, three Internet-based technologies or applications will be analysed with particular care: Web-site/Extranet, Theme portal, and Marketplace, each of them having their own potential role and specific characteristics. By building *Extranet* for existing customers, the system supplier can offer deeply customised information and a procurement channel of consumables. For new customers, the Web site (with/without password) can be used to distribute information of available system alternatives.

Moreover, the system supplier could build an interesting *Theme portal* (see Rowley 2000) with the content-providing partners, including component suppliers, consulting companies,

service providers and other interest groups. By creating this kind of active virtual community with continuously changing content, e.g. virtual seminars or exhibitions, the supplier could also gain the end-users' attention and would directly obtain valuable information about their needs. An example of this kind of community is Hewlett Packard's Mobile E-Services Bazaar (www.hpbazaar.com).

The Internet enables the establishment of *electronic marketplaces*. Marketplaces, also called communities of transaction, primarily facilitate the buying and selling of products and services, and deliver information related to those services. A neutral marketplace could actually serve customers' and component producers' interests, if all competitive products were available and an unbiased view of all competing products and services were offered. This kind of marketplace would be a threat to full service system suppliers. The role of the three selected Internet-based technologies is described in Figure 5.

Figure 5: Role of Internet-based technologies



Role of the Internet in the buying/selling process

Selling the system on the Internet is much more difficult than electronic commodity selling. First of all, the level of customisation needed, readiness for installation, and consulting requirements vary between different customers. Secondly, as the system may have a major impact on the customer's business, trust in the supplier's capabilities plays a key role in the buying decision. However, the creation of trust using only virtual channels is very challenging.

Wise and Morrison (2000) argue that complex, intensive solutions will be sold primarily through personal relationships and multi-step purchasing processes also in the future. On the other hand, they claim that there will be specialist Web-based suppliers for quite complex products and services. These suppliers would standardise and automate the buyer decision-

making process by using effective decision-support software. These virtual advisors can be programmed to behave like an experienced human advisor (Urban et al 2000). They ask questions, record responses and propose recommendations on the basis of the customer's responses. Wise and Morrison (2000) suggest that suitable products and services would be relatively expensive, neither commodities nor completely customised. Electronic components and insurance are mentioned as typical examples.

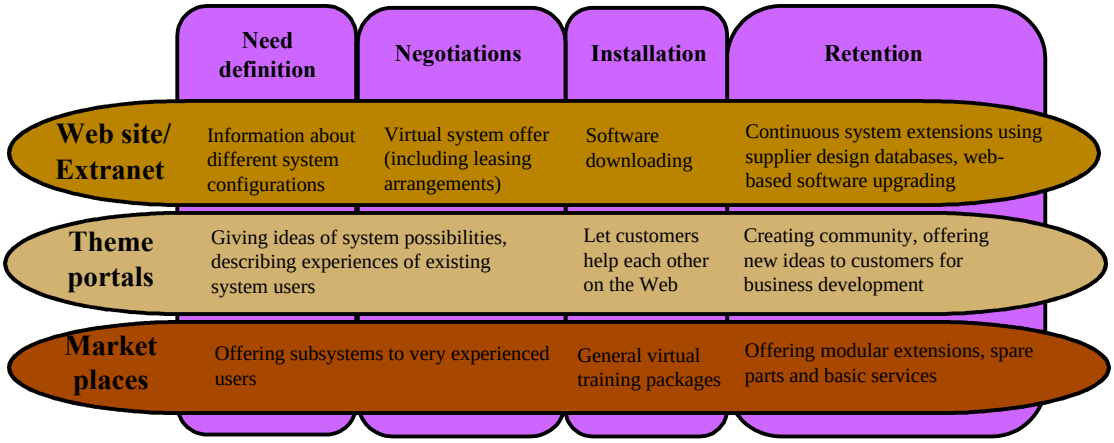
Role of the Internet in the relationship phase

The interaction efficiency which can be achieved through Internet-based technologies provides many new opportunities, especially in the retention phase. In *maintenance* processes, the Internet already has a major role in customer support in many companies. For instance, users can get answers to problems, access documents, order spare parts, download software, and communicate with online discussion groups.

To be able to sell *extensions* to the installed systems, the supplier may offer the customer an access to design databases by Extranet, and in this way the customer would be able to plan modular extensions on his/her own screen, based on information about the customer's own customised system.

The main role of *consulting* is to increase the relationship value by supporting the customer's business. As the system supplier often has customers all around the world, the relatively high travelling costs may cause some problems in providing value-creating advice (benefits>costs) for smaller customers with a limited budget. However, the use of video seminars helps to reach the supplier's own experts and external partners all around the world to solve the customer's problem at short notice. The opportunities of three Internet-based technologies during the different relationship phases are described in Figure 6.

Figure 6: Role of the Internet in different relationship phases – Examples



For each Internet channel and relationship phase, the most suitable example(s) has been selected. Therefore, the list is illustrative, not exhaustive.

CONCLUSIONS

The Internet may have strong implications for the competitive situation and for the capabilities required from system suppliers. It can broaden the capability requirements between full service and subsystem/equipment suppliers and change their competitive positions. For instance, subsystem suppliers can together build a marketplace to offer complementary and compatible subsystems with standard Web-based customer service and support. For the success of these marketplaces, advanced utilisation of virtual advisors and customer behaviour data would be critical. In capabilities, subsystem suppliers may focus on production/logistics effectiveness and Web-based customer relationship management. If these Web-based tools are sophisticated enough and system customers have a broad existing knowledge of systems, these marketplaces could take at least a part of the system extension sales from the full service providers.

On the other hand, full service system suppliers can use the Internet for enhancing their competitive position. The focus might still be on personal customer relationships, which would give an opportunity to deepen the understanding of the customer's business. Through an Extranet application, however, a full service system supplier may improve its service to existing customers. Besides facilitating the procurement of consumables, the Extranet with access to the design databases could be used in planning not only extensions but also totally new applications. This joint development effort might increase the innovative capability of the supplier and enhance further its knowledge of key customers' businesses. Through these development mechanisms, the utilisation of Internet technology contains strategic potential that is not immediately apparent in its more operational applications.

Moreover, theme portal seems to offer a promising forum to create back-selling opportunities by sensing end-market needs and to maintain the community with relevant interest groups. By enabling comprehensive knowledge accumulation, the theme portal could enhance the supplier's strategic vision of the field, critical for a network leadership position.

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