

Analysis of a software company's business network : product vendor, system integrator or service provider?

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ABSTRACT

Software companies live in the middle of complex business networks. It seems often to be quite unclear what is the role or position of different players in such networks. This paper addresses business networks in the context of mobile services that are emerging despite of the bursting of the Internet bubble. The study concentrates on a particular case company producing end-user applications and business management tools for value-added services, offering them for mobile and web environments.

INTRODUCTION

Research problem and approach

The focus of this study is on a certain software producing company and its business networks. In the networked world of organisations, it is worth exploring also the processes involved in the networks, not only the network actors.

The study was conducted as part of the Vertigo project financed by the Technology Development Centre of Finland (Tekes) and carried out by the University of Oulu, the Helsinki School of Economics and Business Administration and several software companies (see www.vertigo oulu.fi).

This study aims to investigate the following aspects:

1. How to build a network-driven analysis framework tool for a software vendor and,
2. How to analyse case company's network position and its development objectives.

Software company's position in the business networks is first to be analysed. The main focus of the developed analysis framework is on relationships with other network parties. Based on the analysis it is possible to develop product and network strategies for strategic business areas.

ELEMENTS OF A CUSTOMER-ORIENTED SOFTWARE BUSINESS ANALYSIS FRAMEWORK

Value net – a model to investigate value creating systems

According to Parolini (1999) a value-creating system or VCS can be defined as a set of activities creating value for customers for consumption activities (Parolini 1999). On the basis of a value net analysis it is possible to define a strategic “map” with nodes (value creation or consumption activities) and relationships (ties between the activities; also flows of material, information etc.) between them (Parolini 1999), as is illustrated in Figure 1. The dotted line arrows represent supporting relationships and the solid ones show the relevant processes for value consuming.

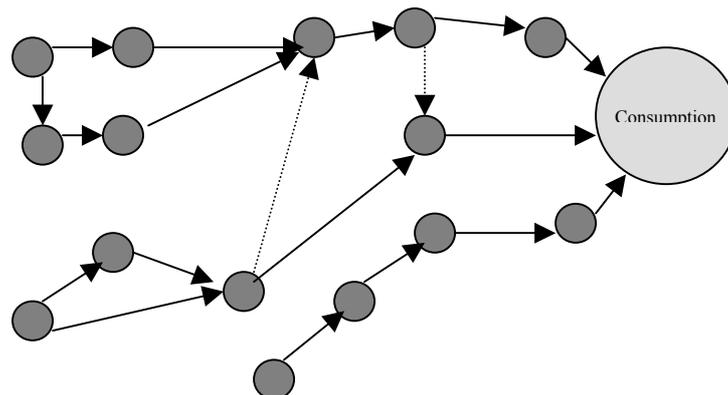


Figure 1.
The value net with nodes and relationships (Parolini 1999).

According to Parolini (1999) it is more meaningful to concentrate on **the value created for the final customers** and **the economic structure** of activities behind the organisational façade. In addition to bare network thinking, some other conceptual elements are needed to build a working analysis framework. In particular, elements for modelling software business logic are needed. Such concepts can be constructed e.g. on the basis of (Rajala et al. 2001), where software business is modelled as: 1. The product development model, 2. The revenue logic, 3. The marketing and sales model, 4. Servicing and implementation model. The model

is suitable to analyse the basic business processes in particular company. The relations between companies or customers are not involved in the model.

CUSTOMER-ORIENTED SOFTWARE BUSINESS ANALYSIS FRAMEWORK

The development of a value-driven and network-based analysis framework was carried out as a combination of the value net concepts discussed in (Parolini 1999) and the elements of a software business model proposed in (Rajala et al. 2001). When these were combined, a model for analysing networked software businesses could be presented. A barrier must be passed before the product or service is recognised as being valuable by the final customers. A certain value net (including the customers) is involved in producing, marketing, delivering, servicing etc. (Figure 2 a, b).

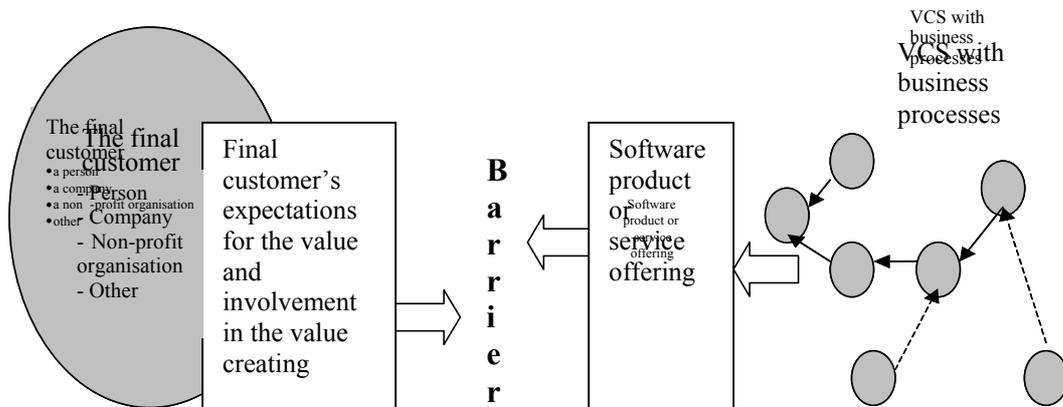


Figure 2 a.
Elements for a customer-oriented business analysis framework.

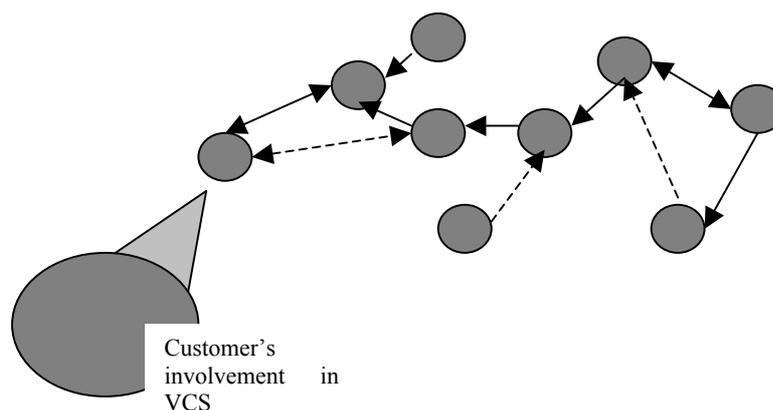


Figure 2 b.
A customer-oriented software business analysis framework.

The two figures intend to show the elements required for a customer-oriented software business model. The VCS carries out software product or service offering activities to the final customers that have some value expectations. However, the customers' involvement in the value creating processes can be passive, as in Figure 2 a. A barrier exists between the VCSs and the customers. In Figure 4 b the customer has become a member of the VCS.

The value-driven and networked business model should allow final customers to interact with the software and service development processes, too – something that Parolini (1999) considers, but does not make explicit. Speaking of software business processes, they include product development, marketing and sales, service and implementation and financial transactions. However, to better fulfil the customers' expectations, it should be possible to invite the customers to act as part of the VCSs.

ANALYSIS OF THE CASE COMPANY'S NETWORK POSITION

For the case study discussed in this paper three key persons in the case company were interviewed. The empirical data gives an overview of the present situation and describes the structure of the network of the organisations and activities in which the case company is involved.

The product family consists of end-user applications developed to function with a certain product. The case company is a part of a business group owned by operators and it has been divided in software products, IT and new media integration services and software production services. Customers are mainly mobile operators, service providers and portal owners. Marketing, sales and distribution is mainly taken care by retailers and OEMs. Company is involved in partnership-network with international telecommunication companies and equipment- and network manufacturers. Globally the most challenging competitors are in the USA.

Analysis of the case

It is essential to study the case company's present and future situation and its position in relation to business networks including customers, competitors, distribution channels and other partners. This includes an analysis of the company's product strategy and offering, too.

Product development

Rajala et al. (2001) have only the core product as an element in their analysis framework, not any additional products or services. However, it would be necessary also to analyse the whole product delivered to the customers, which includes additional products and services, too. The product that is distributed to final customers includes all the additional features, different partners may create a combination of their own products. If one part of the whole product is missing or failed – the final customer can't fulfil its expectations, which may affect negatively every company involved in the network. Moore (1995) suggests providing the whole product to please the customers so they don't rally around and the competition is still open.

Mobile messaging has high potential, which would suit to the case company's application development line e.g. instant or multimedia messaging. Autio et al. (2001) point out four important factors, which will provide significant added value for the end-customers: location-based, personalised, immediate, and available. The mobile messaging services are appraised

to have high potential when immediacy and mobility or personalisation is important market success factors.

The case company has placed a great emphasis on mobile communication services. In this particular case product development is carried out with Java specialists. Product platform is based on Java and it has features of parameterised product (Rajala et al. 2001), because there is a need for some tailoring in every customer case. It seems that concentration on the Java technology is a benefit, because new mobile devices support Java on the application side.

Revenue logic

The company is a part of an international corporation. It is listed in the Helsinki Stock Exchange. The latest interim report shows a negative result in software product business. The total turnover of the corporation is shown in Table 1.

Table 1. Revenue distribution.

Revenue distribution	2002				2001	Year
(in million euros)	Q1	Q4	Q3	Q2	Q1	2001
Software projects	-0,63	0,05	-0,34	0,41	0,40	0,52
Software products	-1,25	-0,63	-0,21	-0,71	-0,60	-2,14
Service operator	0,36	0,80	0,60	0,34	0,19	1,93
Network operator	1,80	2,52	1,89	1,33	5,93	11,67
Cable television	0,19	0,09	0,12	0,11	-0,03	0,29
Mother company	-0,80	-0,77	-0,50	-0,92	-0,24	-2,43
Depreciation of goodwill	-0,46	0,29	-0,25	-0,49	-0,14	-0,59
Group, total	-0,79	2,34	1,32	0,07	5,51	9,25

As the table indicates, the most profitable areas of business of the case company are the network operator and the service operator with cable television that has kept up on the positive side. Software projects and products are not managing so well. The overall situation on the markets has been difficult for project and product business. Telecom customers' investments have been at a considerably lower level than what was estimated.

Product development and internationalisation efforts have demanded noticeable investments in product business. The company's intention has been to develop a "standardised", easy-to-

copy product, which is cheap to reproduce and which could be distributed easily through CD-ROM or data networks to customers. This hasn't been the case, but there is nearly always a need for some product tailoring, this consumes resources from the product development – which should be the core business area. Case company's intention to concentrate on communication services could open new revenue possibilities e.g. in multimedia messaging services. The turnover in the case company's group level is estimated to grow 15 % yearly. The recent years have been non-profitable, because of the difficult situation on the global markets.

Marketing and sales

The interviews that were carried out pointed out that there were some mistakes in efforts to secure the first customers. The competitor managed better in direct sales. This also affected to later efforts, because competitor launched a whole product package that customers accepted.

The co-operation with operators and original equipment manufacturers has been quite successful. They have common product development activities and give valuable references for the company when planning next steps to conquer the international markets.

Servicing and implementation

Some channels partners are focused on servicing co-operation - one group related to this case is system integrators (Rajala et al. 2001). According to the interviews the case company handled the platform implementation to customer's systems. These were carried out as unique customer projects.

On the basis of empirical data it is possible to define a value net for the case company, which is illustrated in Figure 3. On the basis of the case company's value net it is possible to define the main processes and activities important for the customer. Software production and technical support are the supporting activities and more visible part of the processes are the channel and consumer interface partners. Software vendor is quite distant from the end-user.

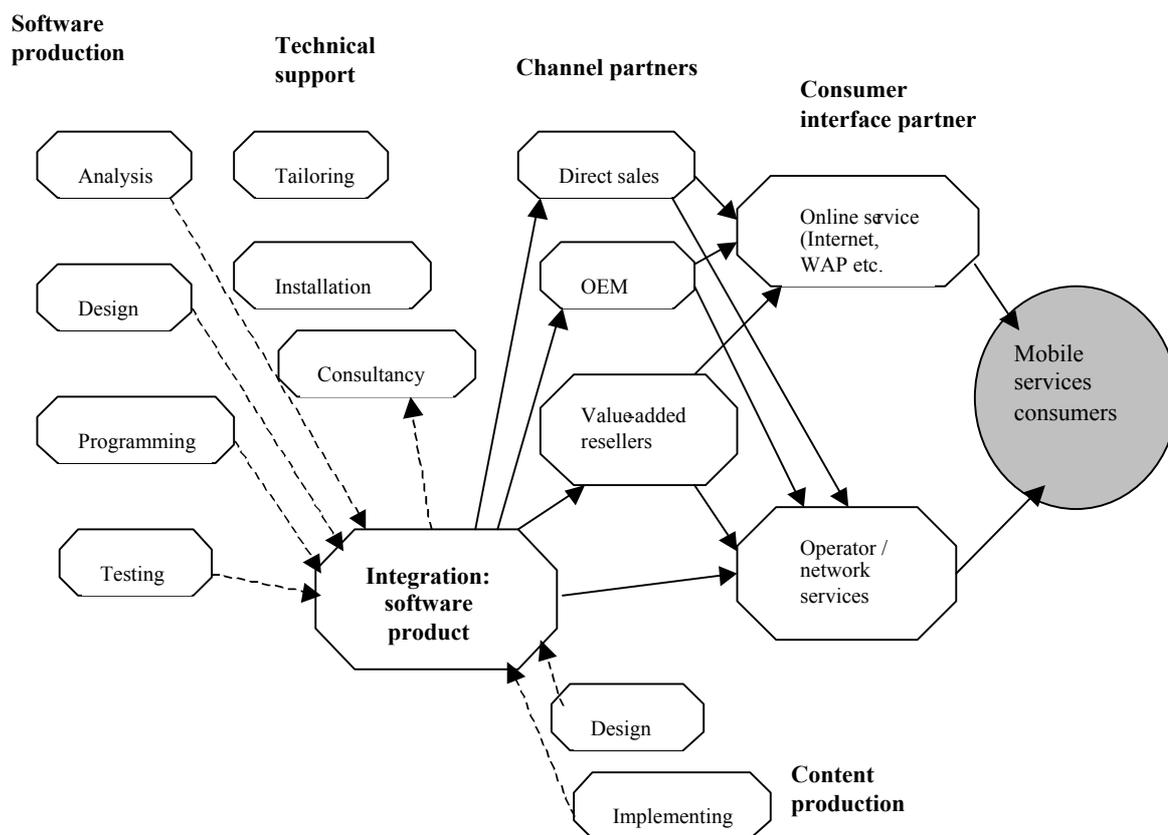


Figure 3.
The key nodes and flows of the value net for the case company illustrated.

CASE COMPANY'S NETWORK POSITION

A company's position in a business network may vary greatly depending on its offering. This particular case company acts as a software vendor by offering software products for a customer segment. It also acts as a system integrator by installing and testing the offered software product. And finally, it acts as a service provider by offering the operation service. The idea of "full-service house" takes resources from the core business area (software production). One company alone has less competence to satisfy the user needs than several networked companies with their special core business areas. Companies together have better possibilities to offer a whole product with additional features for the customers. Obvious is that the aspect of users/customers is arising acutely, when competition is hardening on software business.

CONCLUSIONS

This study presented an analysis framework tool for analysing software business from network and customer perspective. The empirical data was gathered from one case company and then analysed with developed analysis tool. It was revealed that in relation to different customers the company had the role of a product vendor, a system integrator and a service provider. The business focus seemed to be unclear, but the company desired to concentrate on the product vendor's role. This could be achieved by networking in the other business areas. For further studies it is interesting to explore the whole mobile market segment from network perspective. This includes actors and activities involved in from mobile software/device concept design, system integration and software production to development of personalised end-user services.

REFERENCES

- Autio, E. (ed.), (2001), Umts report – an investment perspective. Durlacher Research Ltd. 2001
- Moore, G. A., 1995), Inside the tornado. New York: Harper Collins Publishers Inc. 1995. ISBN 0-88730-765-5
- Parolini, C. (1999), The value net: a tool for competitive strategy. West Sussex: John Wiley & Sons Ltd. ISBN 0-471-98719-0
- Rajala, R. Rossi, M. Tuunainen, V. and Korri S. (2001), Software business models. A framework for analyzing software industry. Tekes. Technology Review 108/2001. Sipoo: Paino-Center Oy. 2001. ISBN 952-457-036-X