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Small Is Beautiful Customer Driven Software Development

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The topics addressed in this paper is how networking can be used as a way for small software houses to enhance their innovative capabilities by using different kinds of collaboration in order to overcome the problems of lacking knowledge as well as resources in order to develop their software.

In small software houses operating in markets with complex products such as ERP-systems networking is necessary in order to gain the needed knowledge and resources in the production development process. Network is not seen as a magic word but leads to different benefits and short comings for the collaborative companies depending on the specific context. In this paper we discuss three types of networks, collaboration between users and producer(s), collaboration between a software house and third party suppliers and a collaboration between academics, professional associations and software houses.

The paper presents a case study of the product development in PPCorp, a pseudonym for a Danish owned software house. PPCorp is a small software house, which is developing and refining an Enterprise Resource Planning (ERP) system. The case study of PPCorp is one out of a series of case studies concerning product development and ERP-systems. The case study builds on a row of interviews with internal actors, customer representatives and on participant observation of interaction with customers (sales and support meetings) and an ex-post study of two customer implementations.

PPCorp is an example of a software house relying on the user-producer relation leading to a reactive product development strategy searching for customers who both are willing to demand new functionality and to be a part of the development process. At the same time the company is characterized by an entrepreneurial work culture where the discussions of product development start on the sales meeting where the customer makes the first demands.

Beside the user-producer relation the company has network relations to companies delivering hardware,

databases and third party software houses. The two first network relations are asymmetrical where PPCorp has no influence on the other companies. In the networks with other small software houses the collaboration has to be at arms length in order to secure the parties an optimal position at the market.

The case shows that it is possible for a small software house to base the product development on networking with the user-producer relation in the center of the networking activities. The benefits to the software development are the ability to provide the software house with the necessary knowledge as well as making financing of the development process less risky. The software house manages to establish a stable relation to the customers lasting for years. These long time relations makes it easier to enter new development projects and harder for competitors to enter PPCorp's market.

On the other hand the case emphasizes the need of broadening the network in order to avoid drifting into software solutions for a very narrow segment of customers and not being capable to deliver solutions in the forefront of the development area. Networks with third party suppliers have been described as possible solutions to this problem. One way is to enter networks of scientists and professionals who have an interest in discussion the future of business processes and ERP, e.g. professional associations on MRPII. Another solution might be to collaborate with other small and medium sized software house.

Beside the needs of being in the forefront of the development and securing a broad variety of modules for the customers to choose from, there is a lack of a network which could support the software house in the attempt to reach new markets.

Finally the case shows how the strength of the entrepreneur also becomes a limitation partly as a problem of leadership but mainly as a result of an internal organization based on close relations in the development process leading to a lack of a systematized managing of the documentation of the programs and the internal business processes.