

# **The Firsam Cluster Initiative: An attempt at regional business development**

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**Special track on cluster initiatives, networks and regional development**

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## **Abstract**

After a small municipality in Sweden was hit not only by the closure of the major industry in the town but also by the dismantling of the air force base which was another major source of local employment, a strategic network (cluster initiative) was set up involving 15 local companies in order to market their skills and know-how. The purpose was counterbalance the loss of the big employers by strengthening cooperation between local small and middle-sized companies. Based on interviews in 2004 and 2010 the relationships between the member companies are mapped out prior to the formation of the strategic network and five years later. The findings illustrate the difficulty to support cluster building for short term commercial success through a top-down approach, but also that such an initiative may create positive effects on social capital and in the end bring about long-term gains for the community.

## Background

The municipality of Söderhamn is situated on the Swedish coast of the Baltic Sea 260 kilometres north of Stockholm. The municipality sports 26,000 inhabitants and is a part of Gävleborg county. Söderhamn can be described as a traditional industrial community (“mill town” or “bruksort” in Swedish) once founded around an important weaponry smithy and gradually developed around the forestry commerce (Hammar & Svensson 2000). In 1945 a military air force base was set up in the town in succession to previous military installations. The industrial production, which was centred on the forest industry, expanded in a new direction when the telecom manufacturer Ericsson started a plant in town in 1947.

Manufacturing can be regarded as the backbone of the local economy, and the reshaping of the manufacturing sector gradually reduced the population during the second part of the 20<sup>th</sup> century (Hammar & Svensson 2000). At the turn of the millennium further disruptive changes in the economic structure were to come. The military airbase was closed down in 1998, reducing the employment rate by almost 3 % in the community (Hammar & Svensson 2000, Isaksson 2008). Then drastic changes in the telecom industry forced Ericsson to sell the plant at Söderhamn to the US company Emerson, but eventually Emerson had to close it down. At its zenith, only 4 years before it was closed down, the Ericsson factory employed 1 200 people in the municipality representing more than 7 % of the community employment. It is easy to understand the impact that the closure of the air force base and the telecom plant had on the municipality as a whole.

One of the projects that was undertaken in order to compensate for the downsizing included actors from the public, private and academic sectors (Triple Helix cooperation) as this had become a preferred approach for regional actors wanting to stimulate the development of regional industry (Lind 2002). The approach could be viewed as an integrated part of the Regional Cluster Programme in Sweden, which is a national programme for regional innovation and growth hosted by the Agency for Economic and Regional Growth (Tillväxtverket), whose mission is to promote growth by encouraging cooperation between firms, academia, and the public sector

(OECD Territorial reviews Sweden 2010). Together with the previous management at Emerson, officials of the municipality developed a cluster idea together with researchers at the regional university. These three actor groups formed the cluster initiative Firsam (Företag i regional samverkan) of the triple helix type supported by the EU Regional Development Fund.

The project idea was to bring to market the combined competence and capacity of the companies joining the Firsam cluster initiative. Firsam was viewed as an aggregate of companies with the ultimate mission to find a product idea to develop and produce jointly. Each company should be responsible for a step in the total value chain. This would demand joint efforts in searching for new products, product development, marketing and financing. A system seller was employed to enable this, and a management group was set up for Firsam. This group initiated a series of activities to create a common frame of reference and enhance the competence of the member firms. They hoped that Firsam would develop into a permanent organization in the long term, creating a business network equally important for the region as one big, single company

On the organization's web site (Firsam Verkstadscentrum 2008) the mission was described by the catchwords "from idea to the final customer in one chain". The links in the chain were specified as follows:

Idea → Development/Design → Prototype → Design for manufacturability/Design for automated assembly → Testing/Authentication → Manufacturing of all parts → Final assembly → Testing → Packaging/Transportation → Delivery → Arrival at the final customer.

The designated scope of the mission was thus very ambitious.

The Firsam cluster initiative was managed by a leadership group. A marketing operative was employed and a couple of persons from the municipality contributed with administrative support. A consultant was engaged to coordinate the project, researchers at the regional university were involved to enhance the competence in various business functions, but above all to stimulate the cooperation between the Firsam members.

## **Purpose**

What is the result of and what can be learned from the process of designing and managing the Firsam cluster initiative? Many different aspects can be identified, e.g., technical, commercial, infrastructural, and social aspects, and different stages in the processes can be put in focus, e.g., designing the cooperation project, managing it, converting it into a self-driven project. In the present paper we choose to focus on the social effects of the project, and the purpose of this paper is to describe and analyze the social effects taking into account the structural conditions and cooperative activities that were performed in this regional strategic network.

## **Theoretical background**

According to the markets-as-networks perspective, companies are considered to operate in a business network of suppliers of goods and services, competitors, resellers, suppliers of complementary services (e.g., after sales services or financial services), customers and their customers, institutional actors and others. A salient feature of the business network is its connectedness in terms of direct or indirect links between firms. Various theoretical approaches focusing on different network aspects include actor relationships (Hägg & Johanson 1982), the actor-resource-activities model (Håkansson 1987), distance to the market place (Krugman 1996), and spatial closeness between firms (Porter, 1990). Much of the current interest seems to be devoted to the effects of network processes on innovation (Romer 1986, Edquist 2000). An aspect of this is the role of social capital (Putnam 1996) and the cooperation between SMEs (Piore & Sabel 1984) which is in focus in the present paper.

Porter (1990) introduced the concept of cluster to put focus on the impact of the local and regional environment on company development. While Porter defined cluster in a spatial context –“the geographic concentration of mutually connected firms and institutions in a specified area” (Porter 1998) – others use the term to include functional closeness. Other concepts used to highlight specific patterns of

commercial activities are industrial districts (Marshall 1920, Brusco 1982, Putnam 1996) and strategic alliances.

Hallén & Johanson (2009) identify the following types of company cooperation:

	Emerging cooperation	Designed cooperation
Interregional cooperation	Business Networks	Strategic Alliances
Regional cooperation	Clusters and Industrial Districts	Regional Strategic Networks

Source: Hallén & Johanson (2009), p. 14. (Authors' translation.)

Figure 1. *Four types of cooperative patterns between business firms*

The case reported in the present paper is a regional strategic network according to the taxonomy in Figure 1, and we define as a collaborative project between companies in a region with the support of public agencies and other organizations in order to stimulate regional and business development (Hallén & Johanson 2009, p. 22). In this case, the regional university played a central role in the development process.

The distinction we make between strategic networks and clusters refers to the difference between emerging and designed (or “engineered”) cooperation. Clusters are seen as spatial networks that have grown and developed over time without central control, whereas strategic networks are designed entities created by some initiator or founders. Jarillo (1988) defines strategic networks as a “long-term

purposeful arrangements among distinct but related for-profit organizations that allow the firms within them to gain or sustain competitive advantage vis-à-vis their competitors outside the network". He also clarifies that he added the term "strategic" to indicate that a strategic network represents "a mode of organization that can be used by managers or entrepreneurs to position their firms in a stronger competitive stance" (Jarillo 1988:32). The term strategic is therefore used as an indicator to specify that the network is managed knowingly by one or several participants.

Strengthening business networks is often seen as an objective of investments in designed networks or cluster initiatives. Johanson and Mattsson (1994) emphasize the relationship aspects of business networks, defining the network approach as a "subset of exchange relationship approaches" and put this approach in contrast to the marketing-mix approach which is defined as a paradigm where "the seller acts and the buyers react". Strongly influenced by social exchange theory the interaction approach was developed further through the extensive empirical studies in the IMP project focusing on business relationships between industrial suppliers and customers in five European countries. Hallén and Johanson (1991) concluded that the patterns of exchange and adaptation in customer-supplier interaction processes vary depending on the strategies and technologies of the parties and the history of their relationship. The interaction processes and the organization of a firm are vital both in marketing and purchasing. Business networks evolve gradually and it is controversial whether attempts to emulate such processes through designed networks is a realistic alternative.

For a strategic network to survive and flourish after the period when it is supported financially or in other ways by its initiators or founders Jarillo (1988) concludes that it must meet the same criteria as any organization must meet to justify its existence. He refers to Barnard's (1968) criteria which postulate that an organization must be effective and efficient in order to survive: effective in the sense that it achieves the desired end, and efficient in the sense that it offers more inducements to the members of the organization than the members put into it. If these criteria are met also a strategic network will prosper since the gain accrued from being a part of the network is superior to the profits in going along.

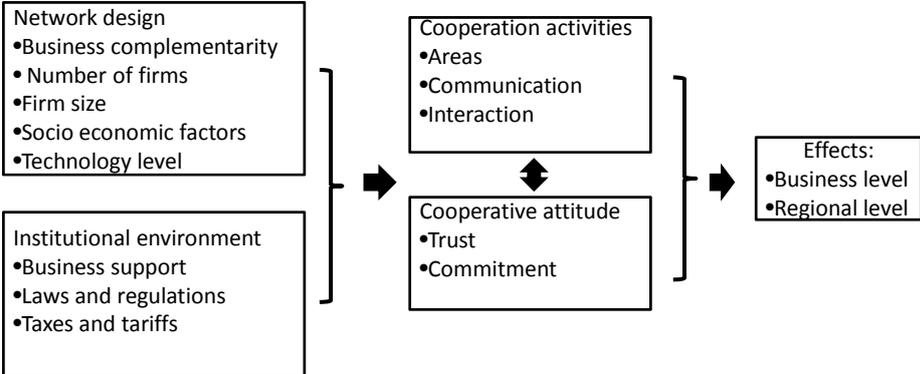
The trust aspect of working towards creating strategic networks can also be explained through the accumulation of social capital. Social capital represents the relational resources attainable by actors through social relationships (Bourdieu, Wacquant 1992). Trustworthiness is an important part of an actor's social capital and relates directly to an actor's ability to create strategic networks (Coleman 1990). Houghton et al. (2009) claim that there is a direct link between a firm's social capital, the firm's involvement in external networks and the firm's strategic complexity. If a firm is involved in a lot of external networks the firm gets access to much social capital. Firms with access to social capital also have possibilities for strategic development with a wide variety of products and product development. Houghton et al. thereby indicate that such firms are more active in their product development, and social capital is therefore an important factor in a firm's innovation process. This connection between social capital and innovation indicates according to Houghton et al. that spatially isolated firms are able to benefit from social relationships. Shan et al. (1994) also make a clear connection between the number of collaborative relationships a firm develops and its innovation output. In the heavy technology-based biotechnology industry in the US it seemed that the more relationships the new firm developed, the more innovation output the firm generated.

An important role in strategic networks is played by the hub. The initiating and coordinating function of the hub can be performed by a firm that sets up the network and takes action in order to develop and manage it (Jarillo 1988). The hub's role includes establishing external relationships for such transactions that the member firms otherwise would have to carry out by themselves at a higher cost. Dhanaraj and Parkhe (2006:659) define the hub firm in a similar fashion as "one that possesses prominence and power gained through individual attributes and a central position in the network structure, and that uses its prominence and power to perform a leadership role in pulling together the dispersed resources and capabilities of network members".

What are the effects of business cooperation? How should it be measured? Hoyman and Faricy (2009) bring forward the notion of social capital and claim that it may have two different effects upon human interaction: bridging and bonding. Bonding represents strong connections within homogeneous groups that often exclude

interaction outside the group. Bridging, on the other hand, entails interaction between different social groups, and more loose bonds between actors. Florida (2006) claims that strong bonds between members of homogeneous groups may hinder innovation since these bonds make the members complacent and isolated from impressions outside their small circle of social interaction. These strong bonds will therefore generate conformity. According to Florida this is a strong obstacle for innovation. Florida connects the “bridging” form of social capital with what he calls the creative class and connects innovation to loose bonds between different social groups which contributes to an open society (Florida 2006).

An overview model (Figure 2) for analysing regional strategic networks, in which Hallén et al. (2009) summarize antecedents, processes, and outcomes, can be used both to identify relevant aspects of strategic networks and possible cause-and-effect relations.



Source: Hallén et al. (2009), p. 62. (Authors’ translation.)

Figure 2. A model for analysing regional strategic networks

## **Data collection**

Data collection about the development in the Firsam cluster initiative was undertaken at different times during a five year period. Structured interviews were undertaken with all 15 companies and the hub management group when the Firsam network project was set up in 2004 and follow-up interviews were made in 2010.

Both quantitative and qualitative data were collected about the Firsam members regarding their working relations. In addition to open questions put by the interviewer a questionnaire was used that the respondents filled out themselves in the presence of the interviewer so it could be collected at once. In the questionnaire the respondents were asked to assess how much their own company worked together with the other member companies of the budding strategic network by using a scale from 1 (not at all) to 5 (very much). The same questions were put in 2010 to the same individual respondents representing the companies included in Firsam, but in some cases the names of the companies had changed, since some had been bought by other companies.

### **The Firsam strategic network in 2004**

Figure 3 and 4, which are based on information from the questionnaires to representatives of the member companies of the Firsam strategic network in 2004 and 2010, show the member companies at these two points in time and the intensity and direction of relationships between them. The properties of the relationships were self-assessed by the respondents on both occasions according to the five-point scale mentioned above measuring the extent to which they considered themselves to be working together with people in the other member companies. The member companies were identified through aided recall as a list of company names was presented to the respondents,

In the diagrams, arrows represent the relations between the companies where the broken lines represent a relationship grade of 4 (“working together rather much”) between the companies, and a solid line represent a relationship where at least one

of the companies in the relationship has graded the relationship with grade 5 (“very much”). The solid lines therefore indicate a strong relationship between the actors.

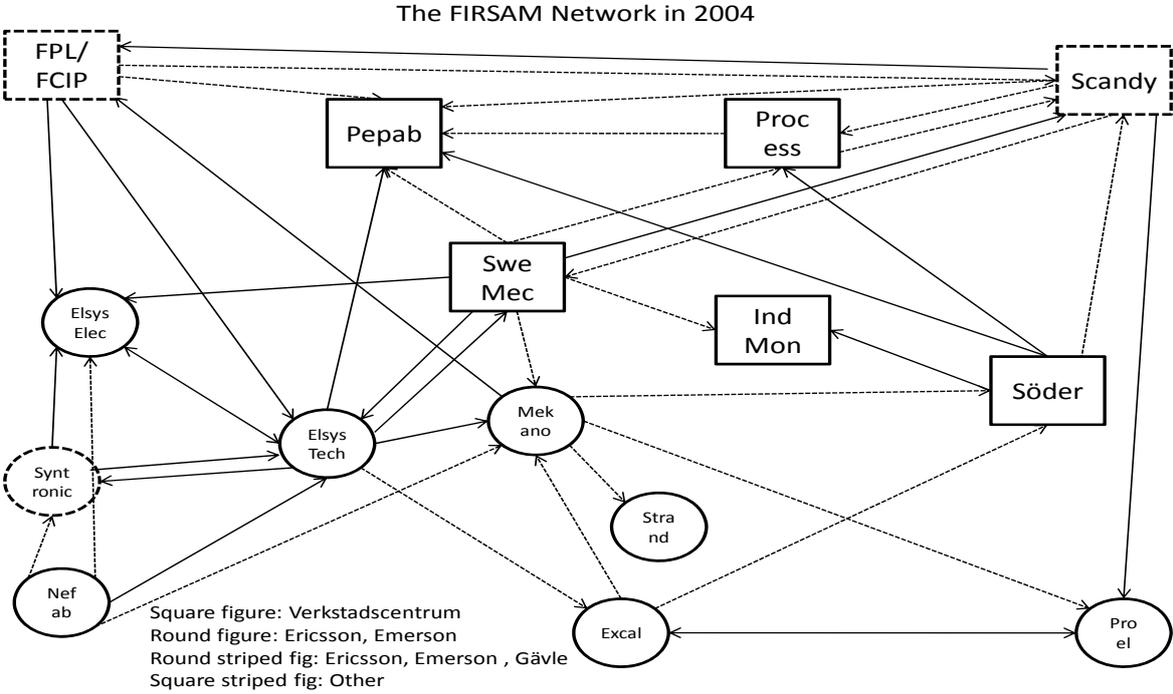


Figure 3. The Firsam network in 2004

The interviewed companies often either mentioned a connection to the company Ericsson or its successor Emerson, or to Verkstadscentrum as a basis for the relationships that the companies in the Firsam network had had prior to the launch of the network project. The companies with a connection to Ericsson or Emerson either consisted of staff formerly employed by these companies, or they did the bulk of their business with Emerson (formerly Ericsson). The know-how of these companies focused on electronics, and they either produced or designed electronic products.

Verkstadscentrum was a network formed at an earlier stage to make joint purchases of materials for production and to work closely with the industrial programme at the local high school in offering trainee positions. The companies mentioning connections to Verkstadscentrum all had their primary business or know-how in the manufacturing field. Usually these companies were experts in cutting and welding different kinds of metal, or active in the mechanical industry.

## **The cluster in 2010**

From the initial interviews conducted in 2004 it can be concluded that the actors' incentives for joining the Firsam network can be described as threefold: spurring joint product innovation projects, creating joint tenders to attract large orders from customers, and to develop learning relationships between the companies included in the network. In the interviews conducted in 2010 the actors expressed that only the social objective was truly fulfilled. This might to some extent be explained by the fact that the other objectives were more explicit and therefore harder to regard as attained. The short time frame in which to reach these objectives might also explain the actors' assessment, since joint innovation projects and tenders might take longer to develop and also rest upon successful development of inter-firm relationships.

It is obvious both in Figure 3 and Figure 4 that the Firsam network was derived from two previous constellations, i.e. companies connected to Ericsson/Emerson or to Verkstadscentrum. It is also indicated in both figures that Syntronic is the only company not based in Söderhamn. Although the Firsam project was a local project focusing on the companies in Söderhamn, Syntronic was strongly connected to some of the other companies through its affiliation with Ericsson and Emerson.

FPL/FCIP also stands out in both figures as a government financed network hub similar to Firsam. FPL/FCIP was a network project financed to convert the facilities of the previous air force base into a business park. The general idea behind this project was to make the capacity of the former air force base useful to local businesses by providing air transport possibilities, thereby making the Söderhamn region less remote from other industrial areas.

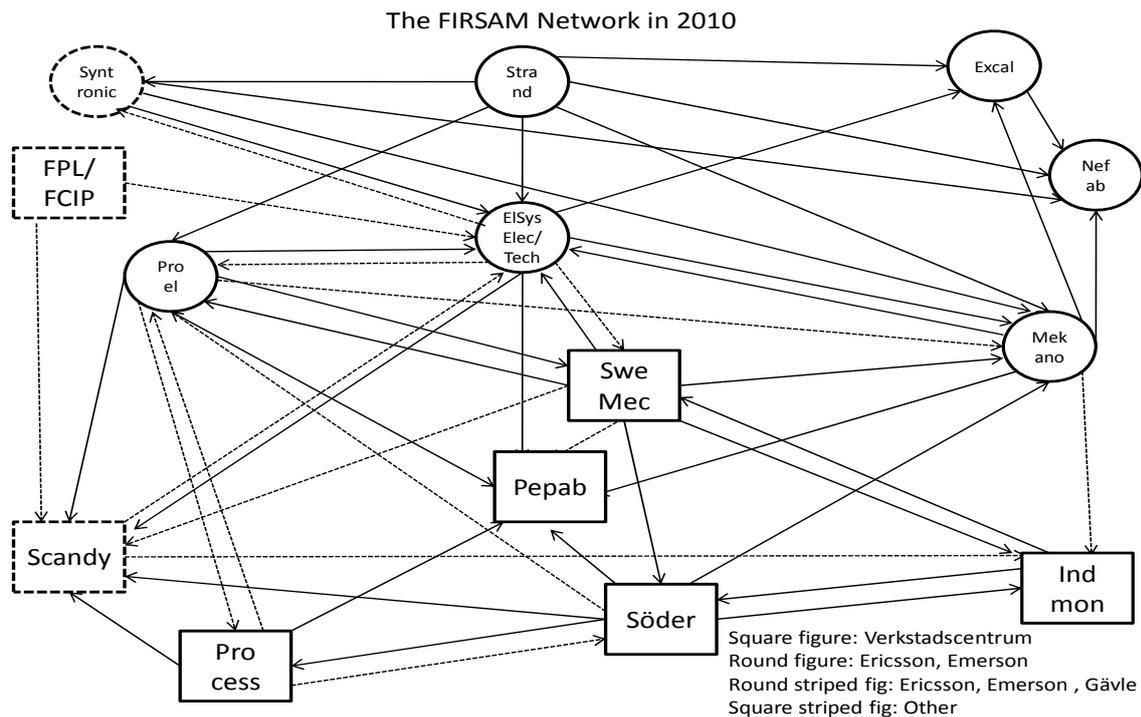


Figure 4. The Firsam network in 2010

## Discussion

The case study describes the relationships of the 15 companies included in the Firsam project prior to the formation of the project in 2004, the process that followed and the situation approximately five years later. The data provide insights into the expectations that the companies had when entering into collaboration and their opinions on the actual outcome of the project in 2010. Both the birth and death of this created network or cluster project are included, and the process is described over time, contributing to the knowledge of the dynamics of cluster cooperation.

Lindberg (2002:37) describes Söderhamn as a typical industrial community that is representative of the industrialization in Sweden. But what characterizes the political and social structure that forms this kind of community? An important element seems to be social capital and how this is created.

The main features of social capital are sharing of common norms and the existence of social networks that contribute to the development of trust between individuals in

society. This trust lays the foundation for cooperation and thereby for sustainable social and economic development (Putman 1996). But social capital is according to Portes and Landholt (1996) not only used in a positive manner. An example of this duality of social capital can be found in towns like Söderhamn when compared to entrepreneurial towns in southern Sweden.

The social climate in small industrial towns like Söderhamn is often described by the expression “mill spirit” (*bruksanda* in Swedish). Forsberg defines mill spirit as “the filter or lens that redefines and adapts the general economic and social structures to the local context” (Forsberg 1997:59), thereby claiming that the mill spirit is a product of the economic and social structures that defines regions or towns like Söderhamn. This mill spirit has according to Hammar and Svensson (2000) developed out of the relation in previous centuries between the dominant local employer, often a factory owner and member of the nobility, and the workers at the mill. The employer and proprietor guaranteed employment in exchange for the workers’ loyalty. This loyalty entailed the notion that all commercial activity outside the one undertaken or controlled by the dominant employer was considered as undesirable. Therefore, entrepreneurship was often considered as a betrayal of this loyalty and frowned upon in the local social context. The mill spirit was based upon a few very strong connections, both internally within the local society and externally through customer contacts. The major employer managed these connections and the majority trusted the collective authority, as the unions and the political parties, in providing secure employment (Hammar & Svensson 2000). The collective as such was in focus and a strong feeling of disapproval towards individual success was prevalent. Instead a sense of duty towards the rest of the employee collective and the notion of “pulling your weight” was promoted.

The conditions that spurred the mill spirit have changed in most regions that share Söderhamn’s history, and so also in Söderhamn. Still many people put their trust in the ability of big corporations, the municipality, and the trade unions to safeguard the economical wellbeing of the region. Solutions implying reduction in employment are expected to come from external actors and from higher instances in the social and political structure. This often leaves the individuals in a state of powerlessness, as a result of lack of belief in their own ability (Hammar & Svensson 2000).

In contrast to the mill spirit the notion of a “Gnosjö spirit” (*Gnosjöanda* in Swedish) is often mentioned. Gnosjö is one of several small towns in the province of Småland in southern Sweden traditionally characterized by entrepreneurship and small scale industry. The founder of the international furniture chain Ikea, for instance, started his business in his home town Älmhult in the same region. The type of social capital prevalent in these towns is sometimes likened that in the industrial regions in northern Italy and is generally considered as a positive form of social capital with regard to business development. In these regions there is a positive effect of social capital that spurs cooperation between local firms, entrepreneurship is endorsed by the local companies and in accordance with community values, and production of goods and services is considered flexible. The Gnosjö spirit is therefore a form of social capital that is believed to foster cooperation and entrepreneurship instead of hindering interaction between different social groups and personal initiatives.

Isaksson (2008) has compared the municipality of Söderhamn to Gislaved, another town in the entrepreneurial district in Småland which is similar in size and industrial background. Both Söderhamn and Gislaved have recently been affected by the closure of major industries, but the effect of these closures differs significantly between the two towns. Isaksson attributes this difference to the distinctly different ways in which the regional politicians handled the setback and to differences in social structure.

In Söderhamn the major strategy for attracting new jobs consisted in efforts to attract a governmentally funded aviation school to be started in the premises of the previous air force base. The strategy was in other words influenced by the notion that attracting governmentally funded jobs would be the solution to the regional employment issue. Gislaved, on the other hand, invested money in the local industry, and the state development agency Nutek was encouraged by the municipality to invest in the development of local companies.

According to statistics presented by Isaksson the strategy applied by Gislaved turned out to be more productive. Gislaved recovered better from the closing of the tire manufacturer Continental than Söderhamn did after the closure of Ericsson. This difference in strategy was according to Isaksson a result of the local social structure

and social capital prevalent in the municipalities. Gislaved had a better history of small and medium-sized enterprises that had started and developed in the region, and thereby a climate that fostered entrepreneurship. The mill spirit influencing municipality of Söderhamn did not provide such a climate. Therefore a regional strategy implying support to local industries was chosen in Gislaved, which in the long run turned out to be a more productive method to promote regional growth. Söderhamn did not have such a history of entrepreneurship and therefore relied in governmentally funded employment to lift the municipality out of the crisis, a strategy that proved less effective (Isaksson 2008).

The hub or coordinator of a strategic network should according to Jarillo (1988) carefully choose the companies that he wishes to include in strategic network cooperation. If the members can “relate to each other” and share the same values, a good breeding ground for trust can be created. This would make it possible to launch innovation processes as early as in the network design stage (Dhanaraj and Parkhe 2006). Ahuja (2000) claims that the development of shared norms of behaviour, and explicit interorganizational knowledge-sharing routines, also grow over time, but shared norms must be put into place in order to create an element of trust. According to Williamson (1985) cooperation does not rest upon writing lengthy contracts but on social interaction characterized by trust and reciprocity. The hub firm must according to Dhanaraj and Parkhe (2006) take an active role in creating trust through social interaction with the network members.

It is obvious from Dhanaraj and Parkhe’s (2006) and Jarillo’s (1988) further reasoning that their definition of a hub firm entails that the hub firm is a commercial entity or firm acting out of its self interest in “orchestrating” the strategic network. However, this role can also be played by individuals, informal entities or agents from the public sector. In the case of Firsam the hub firm was a government funded entity formed solely to govern the strategic network without any other interests besides making it function to the benefit of its members. This difference obviously affects the nature of the hub firm and the way it manages the network, but we still think that Dhanaraj and Parkhe’s description of the attributes and actions that distinguish a hub firm is useful also when the hub firm is a governmentally funded entity. The centrality and the main

function of the hub firm within a network remains the same, even if the motivation of the hub firm might differ.

Hallén and Lundberg (2004) put forward the notion that even if a strategic network dissolves after a rather short period of time, the included actors might learn from the experience and thereby be more open to cooperation in the future. Draulands et al. (2003) cite a report that indicated that 60–70 % of all inter-firm alliances fail within four years. However, Draulands et al. claim that companies that are experienced in managing alliances do better in their attempt to create new alliances. Therefore, instead of focusing on the fit between the companies and the characteristics of the alliance it is more fruitful to look at the capability of the companies in managing the alliance. Draulands et al. thereby point to the ability of making lasting alliances as an art that must be learned, and even suggest that a firm might hire specialists in managing alliances in order to make the best use of their networks.

## **Conclusion**

The general model (Hallén et al., 2009) focuses on the effects both on the business and the regional level. Although the involved firms in the Firsam case deals with business results, it is evident that the short term results can be found mostly at the regional level. The reasons behind the lack of success in creating joint innovation projects and tenders is explained by the actors as a result of the project management's inability to include a strong market focus in the project strategy. The Firsam project consisted of companies with knowledge either in electronic technologies or in manufacturing. Since the project management also came from this background the focus of the project tended to include the technical elements of product development, neglecting to take the products potential market development into consideration. The perspective was very much based on a production logic, whereas the service dominant logic connected to the altered use of the former air force base was put aside.

This focus on technical development and manufacturing also limited the success of the Firsam project in attracting the attention of larger customers in inviting tenders from the actors included in the strategic network. The member companies in the

network all had access to extensive know-how in their technical and manufacturing departments but lacked the marketing skills to attract larger orders. The project managers also failed in adding marketing knowledge since they also came from the same background as the members in the strategic network.

Thus, the synergy effects of combining the know-how of the members in the Firsam network only strengthened the existing know-how of the members without adding the dimension needed to fulfill the goals of attracting joint orders and creating new successful products. In this respect the companies in the project did not complement each other enough to become a force to reckon with in competition with the larger companies in their field of business.

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