COMPETITOR BASED STRATEGIC NETWORKS OF SME

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Small subcontracting companies have difficulty getting in touch with large customers which drastically reduce the number of their suppliers to those able to provide a complete service. Setting up strategic networks is a new way of doing business where companies which are normally competitors can successfully cooperate to address new markets they will never be able to address alone. This paper presents a methodology for creating competitor based strategic networks as well as a case study showing how this methodology has been applied to set up Swiss Microtech, the first network in the screw machining domain.

1. INTRODUCTION

Networks of enterprises can be set up for different reasons. Some of the most frequently used models are (Brütsch, 1999) :

- *virtual factories*, aiming to optimise the load of the production resources of its members to enhance their overall competitiveness
- *vertical networks* built around companies working in the same domain but at different stages of a product
- *virtual enterprises* built around complementary companies wishing to cooperate to develop and manufacture new products
- *strategic networks* built around competitors wishing to cooperate to enter new markets they would not be able to address alone

The main difference between strategic networks and the other forms of alliances is the fact that the future partners see each other as competitors, at least at the beginning of the project. Thus, the main challenge is to build up enough trust to share the information required to run the network. A certain amount of transparency

concerning the current and future workload as well as pricing data is a prerequisite, but such information is normally kept confidential.

This paper presents a methodology for creating a competitor based strategic network of SME. A real case study will illustrate the developed concepts.

2. ELEMENTS OF A COMPETITOR BASED STRATEGIC NETWORK

Two basic elements are required to create such a network (see figure 1) :

- the industrial cluster
- the virtual enterprises

Figure 1 – Elements of a competitor based strategic network

2.1 The Industrial Cluster

The industrial cluster is the backbone of a strategic network. The cluster members are independent enterprises which are and will remain competitors within their own markets but will also be partners to enter new markets they will not be able to address alone (for instance because they are too small or too far away from these markets).

Selecting the members of the initial cluster is a key process during the creation of such a network (Flores et. al, 2000).

These members should :

- bring a certain amount of complementarities at the technical (machine park, technological know-how etc.) and economical (markets, products etc.) levels; the alliance is then better suited to fulfil the customer needs than any individual partner alone
- have a similar level of quality, for instance an ISO 9000 certification
- share a common approach of doing business with customers, suppliers, partners and competitors (common business ethic)
- be deeply convinced that an alliance is really a solution for the future and be ready to give something before receiving

Other enterprises bringing complementary competencies will also join the cluster to be able to provide a complete solution to the customers.

2.2 Virtual Enterprises Based on the Cluster

Virtual enterprises will be set up around cluster members to fulfil a customer need in an optimal way. The best-suited enterprises will join together to realize an order for the lowest costs and within the required delay. Once the order is delivered, the corresponding virtual enterprise may be dissolved or take other new orders.

3. METHODOLOGY TO CREATE A COMPETITOR BASED STRATEGIC NETWORK

The proposed methodology is based on the four following modules :

- strategy
- structure and roles
- business processes and rules
- business plan

3.1 The Strategy

As the cluster members are and will also remain competitors within their own markets, a clear strategy must be defined. This module must give an answer to the following questions :

- definition of the expectations of the customers : this is a key issue as the network, like any other business, will only succeed if it meets the needs of the potential customers and brings significant advantages ! These can be lower costs, shorter delays, complete heterogeneous orders, engineering services and so on
- definition of the market/product segments to be addressed by the network and those remaining in the competition area
- definition of the industrial cluster as defined here above

3.2 Structure and Roles

Even a light construction like a network needs a minimal structure to work. The proposed structure is based on *roles* (Katzy et. al, 1996, Schuh et. al, 1998). A role is a function, which must be fulfilled by one or more persons. Four main roles have been identified (see figure 2) :

Figure 2 – Roles within the virtual enterprise

1. In-/Outsourcing Managers

Each enterprise belonging to the cluster must appoint an In-/Outsourcing Manager responsible for the contacts within the network. The I/O manager receives the requests for quotation from the brokers and prepares the bids in case of interest.

As reaction time is important for a customer, he is responsible for a timely answer. He is also the contact person for the order manager within a virtual enterprise his company is participating in. Finally, he represents his company within the cluster.

2. The Coach

The responsibility of the coach is the animation of the network. He will prospect and evaluate new possible cluster members, organize the information and knowledge transfer and also be the referee in case of problems between cluster members or within a virtual enterprise.

3. The Order Manager

Once a quote is transformed into an order, the Order Manager will take over the responsibility up to the delivery and beyond. He will be the unique business partner for the customer and must set up and pilot the virtual enterprise built for this particular job. He is responsible for the delays, costs and quality of the order as well as for the commercial part (internal and external invoices).

Someone working for the company having the biggest share of the order will normally take the role of the Order Manager.

4. The Broker

The broker « sells » the network to the potential customers and manages the requests for quotations. He will select the enterprises able to realize the possible order in the most economical way (best suited machines, know-how, remaining free capacity and so on) and ask for bids. He is also responsible for preparing and following the quotations until transformation into a possible order.

5. The work groups

Work groups can also be created to address particular problems in a smaller circle and propose solutions for the cluster. Possible work groups are : common purchases, IT solutions and so on.

3.3 Business Processes and Rules

Once the roles have been determined, it is necessary to define the main business processes (Schönsleben, 1998) as well as the corresponding responsibilities :

- incoming requests for quotation : acceptance or not
- transmission of the accepted requests for quotation : distribution and reception of the internal bids
- preparation of a quotation and follow-up
- incoming order : order confirmation and set up of the corresponding virtual enterprise
- order follow up : engineering, production, delivery, invoicing and repartition of the payment
- after sales service and warranty
- dissolution of the virtual enterprise

The rules of the game must also be defined for the cluster :

- membership (acceptance, begin, end, exclusion)
- rights and duties of the members (chart)
- fees and other contributions of the members
- juridical form of the cluster, corporate identity
- treatment of conflicts

3.4 Business Plan

A business plan for the first 2-3 years must be prepared using for instance three scenarios :

- limited success
- probable success
- important success

4. CASE STUDY : SWISS MICROTECH, SCREW MACHINING STRATEGIC NETWORK

Originally, the screw machining industry in the Swiss Jura region was a supplier of parts for the clock and watch industry. Many family based very small and small enterprises (from 10 to 100 employees) produced parts for just a couple of customers. The industrial culture was based on individualism and mistrust; the competition was for them the neighbour workshop. A survey executed in 1998 (Bigoni et. al, 1998) showed the difficulties faced by this branch :

- these small companies were unable to get in touch with large customers of the automobile, electronics and medical branches which drastically reduced the number of their suppliers to those able to provide a complete delivery including engineering, machining, thermal treatments and assembly
- these SME were technically up to date, but their commercial services were lacking
- their delivery schedules were too long and not very reliable

Following the recommendations of this survey, 10 enterprises belonging to the same professional association decided to join an applied research project aiming to develop a competitor based strategic network.

4.1 Towards the Creation of the Network

The first step was the definition of the strategy : the expectations of potential customers were gathered by the way of a questionnaire-based survey followed by interviews with selected potential customers. Following results emerged :

- 70% of the potential customers just needed classical subcontracting relationships. They expected a better price, shorter but over all more reliable delays and the ability to deliver large heterogeneous orders (all kind of materials, lengths and diameters) combined with further machining (drilling, threading etc.) and thermal treatments. They further demanded a unique interlocutor responsible for the whole order
- 30% of the potential customers wished to develop a closer partnership with their subcontractors by delegating the industrialization of parts. For them, using the production know-how of the suppliers is a good way of reducing their costs. It is very interesting for a supplier to penetrate deeper into the value added chain of

its customers as it is a way to bind them and as services often yields more revenues than pure fabrication operations

- a large majority of the potential customers would have no problems in doing business with a virtual enterprise they considered as an interesting model for the future
- even if classical communication methods (phone, fax, letters) stayed at the top, e-mails ranked close behind

The definition of the product and market segments to be addressed by the network was directly derived from these results. Even if e-market places are still rare in the segment of special mechanical parts, the project showed that something is still going on in this domain. The 10 enterprises members of the project group naturally formed the initial industrial cluster.

The structure, roles and business processes were defined as explained here above and have been tested by simulation during 4 months. The role of broker was split between the salesmen and representatives of each participating member and the coach who is responsible for all direct inquiries as well as e-market places activities. Finally, the rules of the game were summarized in a chart to be signed by every partner.

4.2 The Crisis

After one year, when the time had arrived to formally create the network, half of the initial cluster members decided to leave the project. Mistrust and fears were stronger than the desire of collaboration. The four most committed members decided to continue until the creation of Swiss Microtech Enterprise Network, which was officially announced at the end of June 2001. The last activities within the frame of the project were :

- Definition of the legal form (statutes, bodies, registration of the name)
- Corporate identity (logo, website : <http://www.swissmicrotech.ch>)
- Communication (press, professional journals etc.)

4.3 First Experience

During the first six months of existence, 10 enterprises applied for membership. The first most important success was reached when 3 partners decided to buy together new washing machines and received a very interesting quantity rebate, enough to cover the project costs.

5. CONCLUSIONS

The main objectives of this research project were to develop a methodology that can be used to create competitor based strategic networks and to apply this methodology to create a first network for the screw machining industry. Such networks can really help SME to address important markets they would never be able to address alone as the trend towards further reduction of suppliers to those able to provide complete

deliveries will certainly continue (Guide européen des alliances, 1998). These networks can also reduce the production costs through common grouped purchases of raw material, tools, machines and services. Adding services like development and industrialization of parts allows a deeper penetration into the value added chain of the customers, a way to becoming an important partner instead of remaining just a supplier.

The creation of a competitor based strategic network must be initiated by the future members themselves, they must fully support the project and share a common business ethic. Members participating only to get some advantage in the case of success really jeopardize the project as mutual trust and readiness to share confidential information quickly disappear. The chosen strategy must represent a "win-win" situation for each member; no doubts or second thoughts should be left. Conflicts of interests must be thoroughly discussed and an acceptable consensus must be reached before going on. Technical issues like the structure of the network, the roles, the business processes and the necessary IT tools are easier to define. It is also important for the motivation to quickly reach an initial success like a first order or an interesting common purchase. Building trust between the future partners requires important personal contacts that can be established during meetings, workshops and reciprocal company visits.

The creation of Swiss Microtech Enterprise Network is an important step for the screw machining industry in the Swiss Jura region. It shows that it is better to share opportunities than to stay in a splendid isolation and finally disappear.

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