Chapter 3

Enhancing the Preparedness of SMEs for E-Business Opportunities by Collaborative Networks

Heiko Duin
BIBA Bremer Institut für Produktion und Logistik GmbH, Germany

Klaus-Dieter Thoben
BIBA Bremer Institut für Produktion und Logistik GmbH, Germany

ABSTRACT

This chapter introduces virtual Organisations (VOs) as a special organisational form of collaborative networks of SMEs to conduct E-Business projects. VOs are normally not created from scratch, but instantiated from a strategic network or pool of enterprises. This enhances the preparedness of participating members when an E-Business opportunity occurs. The underlying strategic network acts as a breeding environment for the VOs. Therefore, it is called a VO Breeding Environment (VBE). Examples from the automotive industry are illustrating the development and needs of this concept. Strategic planning is important for such a network in order to increase chances of occurring business opportunities. The remainder of this chapter shows how scenario-oriented methods such as cross-impact analysis can be used to support a collaborative strategic planning in such networked organisations. The application of such methods allows long-term foresight and the anticipation of the right technological, financial and business oriented decisions.

INTRODUCTION

The continuing change of producer markets towards buyer markets has a strong impact on the competition between manufacturing enterprises. As a strategic answer collaborative networks such as virtual corporations, virtual enterprises or virtual factories have been discussed since the beginning of the 90ies of last century. Many models and concepts supporting the life cycle of such organisations – consisting of the creation, operation and dissolution phases – have been developed. An important aspect in the creation
phase is strategic planning. This phase is supported by concepts of long-term networks like industrial clusters or regional networks which act as a breeding environment and which enable the short-term creation of virtual organisations. Especially this phase needs support of strategic planning which is a part of the strategic management process.

The two basic types of collaborative networks are represented by Virtual Organisations (VOs) and by Source Networks (e.g. Kürümlioglu, Nøstdal, & Karvonen, 2005):

- A **Virtual Organisation** (VO) is a temporary consortium of partners from different organisations established to fulfil a value adding task, for example a product or service to a customer. The lifetime of a VO is typically restricted: it is created for a definite task and dissolved after the task has been completed. A synonym for VO is the term Virtual Enterprise.

- A **Source/Support Network** is a more stationary, though not static, group of organisational entities which has developed a preparedness to collaborate in case of a specific task / customer demand. Another name for such a network is Breeding Environment.

The relationship between these two forms is that the Breeding Environment prepares the instantiation of VOs. It acts as an incubator for a VO. From the VO point of view, the VO is created when an E-Business opportunity occurs. In order to perform the actual value creation task, the VO can be created from scratch (collecting cooperating partners from an “open universe” of enterprises) or through a VO Breeding Environment (VBE, see Figure 1).

When collecting the partners for the VO from the open universe, several steps or activities have to be performed. This includes partner search and selection of the “right” partners, the definition of a common infrastructure to be used by those partners, agreement on common sharing principles and finally the collaboration needs to be fixed in a cooperation agreement resulting in a contract between all participating partners. It is obvious that this process needs a certain amount of time which may result that competitors are faster in preparing their offer.

---

**Figure 1. Two Ways to Instantiate VOs**

![Diagram showing two ways to instantiate VOs: from scratch and through VBE.](image-url)
Related Content

**SMEs E-Business Security Issues**
[www.igi-global.com/chapter/smes-business-security-issues/76014?camid=4v1a](www.igi-global.com/chapter/smes-business-security-issues/76014?camid=4v1a)

**Knowledge Management (KM)**
[www.igi-global.com/chapter/knowledge-management/36111?camid=4v1a](www.igi-global.com/chapter/knowledge-management/36111?camid=4v1a)

**E-Learning for SMEs: Challenges, Potential and Impact**
Asbjorn Rolstadas, Bjørn Andersen and Manuel Fradinho (2011). *E-Business Issues, Challenges and Opportunities for SMEs: Driving Competitiveness* (pp. 46-64).
[www.igi-global.com/chapter/learning-smes-challenges-potential-impact/46819?camid=4v1a](www.igi-global.com/chapter/learning-smes-challenges-potential-impact/46819?camid=4v1a)

**Improving Resource Management: Lessons from a Case Study in a Middle-Range Governmental Organization**
[www.igi-global.com/chapter/improving-resource-management/29637?camid=4v1a](www.igi-global.com/chapter/improving-resource-management/29637?camid=4v1a)