



---

## **Chapter XI**

# **Networks of SMEs as Virtual Web Organizations: An Experimental Program Aimed at Supporting SMEs in Depressed Areas of Italy**

Roberto Tononi  
ENEA, Italy

Gianfrancesco Amorosi  
ESCE, Italy

ENEA, the Italian public institution for research on energy, new technologies and environment, is conducting a program aimed at supporting networks of small-medium enterprises (SMEs) in depressed regions of Italy.

The program focuses on the experimentation of a business model for these networks and on the introduction of advanced tools and methods, mostly of concurrent engineering. The business model, developed within the program, has the basic features of a virtual Web organization.

This chapter illustrates the organizational and functional model that has been defined in the framework of a cooperation between ENEA and the SMEs involved in the research program.

## INTRODUCTION

In 1998 the Italian Department of Research charged ENEA, one of the Italian major research institutions, with a program aimed at supporting **Small-Medium Enterprises (SMEs)** in depressed regions of Italy. The program is named “Techniques of Cooperative Engineering and Services Provided by Research Consortia to SMEs Through Computer Networks” and has been intended to introduce innovative technologies among those enterprises in order to get around the difficulties posed by the global market, but also to exploit the related opportunities.

Whereas initially the focus of the program was mainly on technologies, very soon it became apparent that some organizational engineering was to be considered, if only to ensure an effective utilization of innovative, but often sophisticated, tools. That turned out to be mandatory when the target of the program shifted from single SMEs to networks of SMEs, in the effort to match a widespread trend of small enterprises and to gain some economy of scale in the utilization of the program results.

Networking is especially sought by small enterprises when they start facing the intrusion of outsider competitors that, often proposing wider product concepts or cutting very low on cost, threaten the traditional client-supplier relationship based mainly on trust. Such contingencies warn about the arrival of the global market, towards which small enterprises find themselves with an inherent lack of resources. A network provides an SME with a chance for offsetting this lack of resources with those of other enterprises, all of which provide specialized and also complementary contributions. Through networking, SMEs can cover all the phases of the product/service life cycle, thereby meeting a widespread requirement in the global market and still focusing on their own core business, i.e., what they are able to do the best, and that turns to the advantage of everyone; in other words, regardless the initial reasons for which it is pursued, networking of SMEs has its own objective merits.

However, if a network has to retain the appreciated features of a typical SME, such as high flexibility, entrepreneurial creativity, high productivity of its employees, low level of internal conflicts, benevolent acceptance by the local community and more, high levels of independence and autonomy, strictly tied to those features, are to be granted to the enterprises that join the network. Hence the classic problem to be faced is well-illustrated by the metaphor of the “orchestra made up of soloists.”

The recognition of this problem has strongly influenced the whole strategy of the research program, which has then included the development of an organizational and functional model, specific for networks of SMEs in the perspective of endowing them with tools more powerful than those normally owned by single SMEs and more appropriate to take the challenge of wider and more differentiated markets.

The adopted research method has been that of building, first, a self-consistent framework of criteria and operational procedures, without lingering over details, and of moving, then, to a phase of in-field experimentation with SMEs that are seeking an appropriate form of aggregation, in order to check the soundness of the

13 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: [www.igi-global.com/chapter/networks-smes-virtual-web-organizations/26065](http://www.igi-global.com/chapter/networks-smes-virtual-web-organizations/26065)

## Related Content

---

### DeepaMehta: Another Computer is Possible

Jörg Richter and Jurij Poelchau (2008). *Emerging Technologies for Semantic Work Environments: Techniques, Methods, and Applications* (pp. 154-180).

[www.irma-international.org/chapter/deepamehta-another-computer-possible/10149](http://www.irma-international.org/chapter/deepamehta-another-computer-possible/10149)

### Digital Connections and Learning Styles

Julie Davis, Letitia Harding and Deanna Mascle (2011). *Virtual Communities: Concepts, Methodologies, Tools and Applications* (pp. 1321-1339).

[www.irma-international.org/chapter/digital-connections-learning-styles/48741](http://www.irma-international.org/chapter/digital-connections-learning-styles/48741)

### An Interactive Space as a Creature: Mechanisms of Agency Attribution and Autotelic Experience

Ulysses Bernardet, Jaume Subirats Aleixandri and Paul F.M.J. Verschure (2017). *International Journal of Virtual and Augmented Reality* (pp. 1-15).

[www.irma-international.org/article/an-interactive-space-as-a-creature/169931](http://www.irma-international.org/article/an-interactive-space-as-a-creature/169931)

### Primary Generators: The Influence of Digital Modeling Environments in the Creative Design Process

Luis Alfonso Mejia and Hugo Dario Arango (2019). *International Journal of Virtual and Augmented Reality* (pp. 11-22).

[www.irma-international.org/article/primary-generators/239895](http://www.irma-international.org/article/primary-generators/239895)

### Motion Cueing Algorithms: A Review: Algorithms, Evaluation and Tuning

Sergio Casas, Ricardo Olanda and Nilanjan Dey (2017). *International Journal of Virtual and Augmented Reality* (pp. 90-106).

[www.irma-international.org/article/motion-cueing-algorithms-a-review/169937](http://www.irma-international.org/article/motion-cueing-algorithms-a-review/169937)