

Chapter 45

Exploiting Technological Potentialities for Collaborative New Product Development

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ABSTRACT

The new competitive scenario based on knowledge resources has led firms to become more open to innovative sources and mainly to focus on collaboration with customers to co-create value (Prahalad & Ramaswamy, 2004; Sawhney, Verona & Prandelli, 2005). The Internet, and more in particular, web 2.0 technologies, enable patterns of collaborative innovation, involving customers into the NPD process.

By contrast, empirical studies show that there are many large and small companies which do not grasp the opportunities provided by the customers' contribution. This is due to a number of inhibiting factors that represent barriers for the collaborative innovation. This chapter aims firstly to delineate and validate some of these constraints by using the insights coming out from a case study and secondly to suggest a possible solution in order to overpass some of the barriers identified and to exploit the customers' knowledge acquired on the web.

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INTRODUCTION

Many authors have deeply argued the importance of innovation as one of the key factors that affects competitiveness. As consequence, the ability to innovate has been direct linked to the ability for firms to compete at the individual, regional and national level (Neely & Hii, 1998). The values created by innovations are often manifested in new processes or in new products that contribute to wealth and the two types of innovation are not mutually exclusive.

Considering a firm as a center of resources, skills and competencies, the effect of innovation is to transform a firm's inner capabilities, making it more adaptive, better able to learn and to exploit new ideas. This enhanced flexibility is crucial in the attempt to face the changing market conditions.

Nowadays, innovation is originated by the combination of different knowledge and expertise shared within and outside an organization, leading to the increase of inter-organizational collaborations in order to innovate (Freeman, 1991).

Collaborative Innovation is being considered as a strategic approach for coping with the complexity and dynamicity of today's business environment and it can be analyzed both from the suppliers and customer's side. The firm's linkages to external networks and the relations to customers have been shown to be important to innovate activities in firm (Von Hippel, 1988).

The idea of integrating users into the production process has been increasingly considered as a promising strategy for companies being forced to react to the growing individualization of demand.

Empirical studies conducted by Von Hippel (1988) confirm the dominant role of users, not only in the preliminary "idea generation phase" (as firstly argued), but in all stages of product innovation.

Von Hippel's research (1986) has led to the concept of "Lead Users", defined as those users who are able to face needs that will be general in

a marketplace and are positioned to benefit significantly by obtaining a solution to those needs.

In particular, a great contribution to the customers' involvement has been attributed to the advent of web 2.0 technologies (Dahan & Hauser, 2002); evidence of this can be found in the large number of firms that have adopted web-based technologies as tools of communication both with customers and employees. In fact, web 2.0 technologies enable firms to extend their traditional boundaries, promoting the establishment of knowledge sharing phenomena and Open and Collaborative Innovation processes (McAfee, 2006).

Through the usage of Internet, companies are increasing the awareness about the opportunity for co-creating value, together with customers, grouped into virtual communities. Moreover, within this scenario, virtual communities of customers are progressively more adopted by firms across a number of industries as virtual laboratories for the development of new products and services (Fuller, 2006).

However, it is important to note as although the high interests of firms in undertaking the user-innovation paradigm, there are few successful evidences about the full exploitation of the customers' knowledge. This seems to be due to a variety of factors that can reduce the real participation of users to the development process. Focusing on this argument the chapter highlights the main inhibiting factors to the customers' involvement to the New Product Development (NPD) process. Then, through a case study, the chapter gives evidence and explanation about the resources and tools with which a firm can be able to overpass the constraints linked to cultural, organizational and technological barriers.

The chapter is organized as follows:

- A deep investigation about the benefits of customer's contribution to the NPD process, through a literature review on the collaborative innovation paradigm by the customers' perspectives. In particular a

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