

Chapter 15

Cross–Organization Virtual CoP: A Field Study in an Information– Based Industry

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ABSTRACT

The chapter motivates and presents an approach for assembling innovative information-based products and services by virtual cross-organization communities of practice. Using a case study on assembling vacation packages, we describe the cross-organizational virtual partnership, the mechanics allowing it to operate as a virtual community of practice and how collective intelligence of the members is appropriated to ensemble innovative information-based products for tourists. The results provide useful insights into innovating through virtual networking as well as the ICT tools that may be used to foster value-creating networks of practice in boundary spanning domains.

INTRODUCTION

Recently, an increasing number of studies in the literature on knowledge management seek to explore the design of unified collaborative spaces and information infrastructures through which virtual communities of practice (Wenger & Snyder, 2000) engage in distributed collective practices (Turner

et al., 2006) to assemble innovative products and services. This chapter will continue this line of research focusing on how cross-organization virtual communities of practice appropriate ICT tools and infrastructure to assemble information-based and non-material (intangible) products whose competitive advantage results primarily from the availability of information and knowledge. Our primary interest is to demonstrate a design case in which collective intelligence of a bound-

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any spanning virtual group is codified to support distributed collective practices for assembling *families* of vacation packages for tourists.

The approach followed is rooted in the design science paradigm for information systems research (Hevner et al., 2004). Specifically, a novel virtual practice of vacation package assembly was devised so as to foster virtualization of the operations of boundary-spanning alliances (Akoumianakis, 2009; 2010). It turns out that the innovative character of the products assembled through this practice is due not only to the way in which they are compiled (i.e., factory-based assembly line), but also to their plasticity which allows them to exhibit both locality and boundary function.

The rest of the chapter is structured as follows. The next section reviews related work with the aim to assess emerging trends in virtual communities of practice and how they can foster innovation in information-based new product development. Then, we describe a case study on collaborative assembly of vacation packages in the tourism sector. The discussion section highlights some of the innovative premises of the present work in the context of community-based innovation. The chapter is wrapped up with a summary of key contributions and some concluding remarks.

BOUNDARY SPANNING COP AND INNOVATION MANAGEMENT

The present work links with two prominent theoretical concepts, namely communities of practice and innovation in community settings. The former brings to the forefront long-standing debates on what are communities of practice, the intrinsic of their function online, as well as the more recent issue of appropriate information infrastructures or practice-oriented tools. The latter, resurfaces a more recent challenge approached mainly by management scholars interested in the fabrics of knowledge management and user-driven innovation in community settings. Our interest in

these two concepts, as summarized and detailed in this section, is motivated by recent research and development activities focused on the study of distributed collective practices in virtual cross-organization communities of practice. We will therefore attempt a brief but representative review of related literature to set the focus of our current research and motivate the subsequent discussion on innovative information-based product development in cross-organizational virtual communities of practice.

Cross-Organization Communities of Practice

Communities of practice (CoP) bind together people who share a concern, a set of problems, an expertise or a passion about a topic (Wenger et al. 2002; Wenger & Snyder, 2000) to appropriate, share and create organizational knowledge. Increasingly, CoP are seen as a powerful model for improving knowledge-based competences by fostering a social view on learning and knowledge creation (Kimble & Hildreth, 2005; Brown & Duguid, 2000). Recently, innovative IT has enabled the virtualization of the operations of communities of practice introducing concepts such as networks of practice (Brown & Duguid, 2000), knowledge communities (Lindkvist, 2005) and value-creating networks (Buchel & Raub, 2002). These studies indicate that, within a particular context, different configurations of characteristics may be more or less conducive to a community's success.

Turning into practice domains, the literature reports several stories illustrating the catalytic role of virtual communities of practice in free and open source software development projects (Scacchi, 2005; Scacchi et al., 2006), the automobile and airspace sectors (Wenger et al. 2002), service industries such as tourism (Cardoso and Lange, 2007; Stockdale and Borovicka, 2006) or insurance (Dignum & van Eeden, 2005), consumer electronics (Enkel et al., 2000), as well as in domains administered by national agents and

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