Chapter IX

User Networks as Sources of Innovation

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ABSTRACT

In the computer and software business, it is common practice to involve users in problem solving and sharing of experiences, not only between a company and individual users but also between groups of users. Although customer support has gained some attention in recent years, a more intriguing thought would address users as a source of innovation. What if users themselves, or in interaction with other users, would, in addition to solving specific problems, also develop and share new knowledge that influences products within companies? In connection with this notion is the question as to how companies can come to relate to these networks of users. The empirical case study in this chapter was generated from a long-term study during 1998-1999 with Cisco Systems and the company's groups of users. Of particular interest to this study was the use of the Cisco newsgroup, which is available on the Internet. The conceptual framework was generated from the emerging theory of Communities of Practice (CoPs). By using this framework, user networks were recognised as peripheral and yet vital sites of innovation. This implies new strategies for management of innovation as the creation of spaces for interaction with and between users and addressing networks rather than individual users.

INTRODUCTION

One problem relating to new product development is that customers or users may be unacquainted with the technique and its use and are thus unable to evaluate the benefits. Furthermore, users may have difficulty articulating their needs, in that these needs are embedded in daily practices. Traditional market research would therefore be inadequate to provide companies with sufficient information about their customers. Von Hippel (1988) suggested that if users address key issues in their own specific context, new ideas could be more easily generated. To focus on the practice of customers or users has also been proposed as a successful, but less applied, way of understanding customers (Dougherty, 1992).

Later research (e.g., Von Hippel, 2002a) has adopted the concept of a community-based perspective on users and customers as innovators. Here the interactions among people are essential. Franke and Shah (2001) noted that it is by linking people to each other that innovators are provided with powerful resources. Such a perspective differs from traditions of new product development (Jelinek & Schoonhoven, 1990; Leonard-Barton, 1995) in which attention is turned to internal roles, resources and competencies (e.g., managers, engineers, researchers and experts).

In the field of innovation theory, there thus seems to be a growing interest in customers as innovators. Some novel thoughts include users and customers being recognized as connected, which turns attention away from the individual user to the network or context. Von Hippel (2002b) further defined user networks as user nodes interconnected by information transfer links which may involve face-to-face, electronic or any other form of communication.

Whereas the notion of user networks has grown out of advances in innovation theory, there are evident links to Communities of Practice. Common links are the view on: (1) innovation as generated from practice in everyday life, (2) the situated nature of learning and (3) joint rather than individual problem solving. This chapter explores user networks as sources of innovation and how they relate to the emerging theory of CoPs. Using the unified view of working, learning and innovation (Brown & Duguid, 1991), this chapter proposes that user networks are a peripheral, yet vital, site for innovation.

Communities of Practice

Earlier studies of CoPs observed that workers found their own ways of creating new work patterns, which are often different from those formally prescribed. From these observations, three central processes of CoPs emerged: social construction, collaboration and shared language. By adapting to these three processes, participants were engaging in joint problem solving. Thus, the focus in CoPs is not the individual or his or her cognition, but rather the interaction among participants.

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