Chapter 4
Dynamic Capabilities in R&D–Networks

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ABSTRACT
This chapter addresses collaborative business networks at the level of industry/cluster networks, which is important and relevant from the strategic management perspective in several industries. Collaborative networks are seen to offer firms collective benefits beyond those of a single firm or market transaction. The author of this chapter aims to contribute to the development of theories of knowledge management, organizational learning and a resource-based view of the firm. The initial argument is that the characteristics of the task that organizations try to accomplish through forming a specific collaborative network influence the organization’s intellectual capital, the capabilities developed and required. This chapter is based on a longitudinal case study in the ICT-sector.

INTRODUCTION
Understanding major change factors like managing data and knowledge and the fast pace of technology change that have affected organizations in the late 1990s, this study analyzes the creation and development of dynamic capabilities in a business network context, and reviews how the capabilities developed assisted the organizations in gaining competitive advantage. As a consequence of rapid industry-level changes in the ICT-sector in the 1990s and at the beginning of 2000, long-term forecasting was difficult due to the dynamic evolution of the industry and actors and because technologies had undergone rapid development, leaving it hard to know which would be the dominant players, technologies and solutions of the future. The convergence of media, IT and telecommunications technologies were creating new business possibilities. As a result, flexibility and adaptability to change were essential for firms to survive. Nevertheless, the years of 1990-2005 produced a major structural change in the ICT-sector with firms responding to those changes with new organizational structures, introducing new
products and services and learning new skills and competencies. It required efficient collaborative systems to transfer information and knowledge within the organization and between the participants of R&D collaborative networks. This all required an efficient process management, agile leadership, good communication skills with R&D, IT departments and the senior management. In other words, it required active intellectual capital management within the organization to gain the full knowledge and capability capacity of the organization in use.

In a partnership, companies are highly committed to the ongoing relationship over an extended time period, and the motivation behind this partnering is a joint objective of a mutual benefit (Dyer & Nobeoka, 2000; Dyer et al., 1998, 59-62). Anderson and Narus (1990,42) defined a working partnership between two companies as “the extent to which there is mutual recognition and understanding that the success of each firm depends in part on the other firm, with each firm consequently taking actions so as to provide a coordinated effort focused on jointly satisfying the requirements of the customer market place.” Cooperation, mutual trust, communication and sharing relevant and confidential information are essential for the development and maintenance of the partnership. Partner organizations are interdependent on each other, sharing the risks and rewards of the relationship. The maintenance of a relationship requires conflict-resolution techniques (Mohr & Spekman, 1994, 151-152). Partnerships also require investments on relationship-specific assets (Dyer & Singh, 1998, 662). Partnering is a process where a customer firm and supplier form strong and also broad social, economic, service and technical ties over time (Anderson & Narus, 1999).

In addition, to survive in the fast-changing environment, the case organization as “an adaptive organization” (Radjou, 2002) would have to be more like a shifting “constellation” (Mintzberg & Huy, 2003) that has linkages with its decentralized and semi-autonomous organizational units. Howell (2008) also stresses the importance of adaptive organization and dynamic capabilities in R&D. Capability development in R&D seems to be an important prerequisite for converting external knowledge into internal innovation.

Previous studies of the resource-based view of the firm (RBV) claim that the firm’s competitive advantage lies in its capabilities and the efficient usage of them (See e.g. Penrose, 1959; Rumelt, 1974; Wernerfelt, 1984; Zollo & Winter, 2002). In addition, the dynamic capabilities view suggests that organizations acquire new knowledge, skills, expertise, and capabilities through organizational learning (Teece et al., 1997). In the existing literature, there is limited understanding of the dynamics of the emergence of capabilities in R&D networks, particularly with regard to the role of actors in the development process (Alajoutsijärvi et al., 1999; Håkansson & Lundgren, 1995; Håkansson & Waluszewski, 2002; Lundgren, 1991). This study therefore aims to contribute to such discourse by studying the evolution of a capabilities and knowledge through joint collaboration projects from the viewpoint of the two major actors.

The purpose of this study is to investigate the joint effort of a multinational company (MNC) and another player of the ICT-sector and how they jointly developed their organizational intellectual capital (IC) and their dynamic capabilities in R&D collaborative networks. The starting premise is that the characteristics of the task that organizations try to accomplish through forming a specific collaborative network influence the organization’s intellectual capital, the capabilities developed and required. This chapter is based on a longitudinal case study in the ICT-sector. The main argument is that identifying the capabilities needed in a business network context and supporting the creation of new capabilities can have a positive impact on the organization’s market share and competitive success.