

Resolving Conflicting Requirements in the Management of Technology and Innovation - Insights from a Comparative Case Study of ADSL Technology

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Abstract

In a world of fierce competition and relentless change, firm survival and growth increasingly relies on the ability to innovate continuously. However, managing innovation alongside current business activities is a challenging endeavor characterized by a high degree of uncertainty and multiple, often paradoxical demands. Whilst several of these demands have been studied extensively, balancing the requirements of differentiation and sourcing remains largely unexplored. How can firms effectively reconcile the enactment of resources with the need for differentiation? How can firms cope with the fact that not all events are ex ante foreseeable when developing new emerging technologies? This paper relies on a longitudinal comparative case study of Alcatel and Ericsson. In the early 1990's, Alcatel and Ericsson jumped on the bandwagon of a new technological challenge. Both engaged in the development and commercialization of ADSL. Whereas Alcatel became market leader, the opposite was true for Ericsson. Based on interviews with involved engineers and managers at all hierarchical levels in both firms, and content analyses of internal documents, our research unfolds the process of effective enactment of an incumbent's technology and innovation strategy. Our findings reveal intriguing new insights that are relevant for the fields of engineering management, technology and innovation.

Keywords

comparative case study, technology and innovation management, engineering management, product development

Biography

Annelies Geerts is a final year PhD student at the University of Twente (the Netherlands), Department of Business Administration and the University of Leuven (Belgium), Department of Managerial Economics, Strategy & Innovation. Previously, 2008-2010, she worked as a researcher at the Operations and Technology Management Center of the Vlerick Business School (Belgium). Her research focuses on effective innovation and technology strategies of incumbent firms in high-velocity environments. Methodological approaches vary from case studies through econometrical analysis of panel datasets.

Bart Van Looy is currently full professor at the department of Managerial Economics, Strategy and Innovation, Faculty of Economics and Business, University of Leuven (Belgium). He obtained his PhD from KU Leuven. He has a (part-time) research affiliation at the University of Twente (the Netherlands) and teaches at the MBA program of Flanders Business School (Antwerp, Belgium). Bart Van Looy is co-promotor of ECOOM (responsible for the service and research activities pertaining to Technometrics / Patent Analysis) and responsible for the research activities of INCENTIM (Research division KU Leuven R&D). Previously, he worked as a consultant in the field of HRM and organizational behavior.

Klaasjan Visscher is assistant professor at the department of Business Administration, Faculty of Management and Governance, University of Twente (the Netherlands). He holds a master degree in Industrial Engineering & Management and in Philosophy of Science, Technology & Society. He obtained his PhD at the University of Twente. His teaching activities relate to organization theory, innovation management, and design methodology. Klaasjan Visscher is editor of Creativity and Innovation Management, together with Petra de Weerd-Nederhof and Olaf Fisscher. His research focuses on organizational design processes and the development of innovative organizations in their technological and industrial context.

Petra de Weerd-Nederhof is currently professor of Organization Studies & Innovation and Director of the Twente Graduate School at the University of Twente (the Netherlands). She holds an engineering degree and obtained her PhD from the University of Twente. Next to her positions at the University of Twente, Petra De Weerd-Nederhof coordinates the yearly Doctoral Summer School in Technology Management for PhD students and is board member of the International Product Development Management Conference, both under the auspices of EIASM. She is also is editor (with Klaasjan Visscher and Olaf Fisscher) of the academic journal Creativity and Innovation Management, published by Wiley.