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## **Introduction**

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### **1 Introduction**

Radical innovation is usually thought to be the creation of a new line of business – for the firm or the marketplace – with unprecedented performance features. It creates such a dramatic change in processes, products or services that they transform existing markets or industries or create new ones.

The current new services and product development climate is characterised by increased domestic and global competition. The ability to expeditiously develop and market radical innovation is one of the crucial success factors to enhance growth and expansion into new markets. To keep their competitiveness and maintain their position at the top of their sector, technology-intensive companies are networking with each other, combining their competence, sharing resources, distributing risks and running from minor, incremental improvements right through to radical innovation.

This special issue sheds new light on radical innovation management in networks of high-tech strategic partners required to shape and enhance the new economy. There is practical value in understanding the pattern of radical innovation and the managerial competencies needed to make radical innovations happen. This understanding can help innovative networks apply better management practices to different types of innovation development and make the course of radical innovation shorter, less sporadic, less expensive, less uncertain and more profitable.

The objectives of this special issue were, as stated in the call for papers: to develop and promote the field of radical innovation management in networks of high-tech strategic partners, to further the knowledge, research, theory and practice in this specific field and to provide a platform for sharing and exchanging views, experience and ideas on the latest findings and best practices.

The topics we invited for this special issue included, but were not limited to the following: radical innovation in networks of strategic partners; the role of the partners' organisational design in the radical innovation development; the impact of radical technological innovation on partner relationships; human side of, and leadership in, radical innovation; the role of knowledge management in radical innovation development; source of radical innovation in networks of strategic partners; educational institutes and industrial firms: two-ways interaction; managing intellectual property rights in networks of high-tech strategic partners; management models and methods leading to radical innovation; critical success factors for technological radical innovation; state (government) policy to support radical innovation; the role of geographical innovative-

clusters in radical of innovation; and new approaches to evaluate the technology and the application of innovative projects.

Although the nature of the peer review process yields only a limited number of topics and authors, this special issue succeeds in capturing a representative sampling of work being carried out by leading scholars and practitioners in the field.

## **2 Papers in the special issue**

About 39 submissions were received from authors located in 17 countries: Australia; Brazil; Canada; China; Denmark; France; Germany; India; Italy; Japan; The Netherlands; Spain; Switzerland; Taiwan; Turkey; the UK; and the USA, representing 42 universities, research centres and R&D departments in industrial firms. Following the general policy of IJTM, all papers, including invited papers, were initially reviewed by at least two reviewers. Thirteen papers, by 28 authors and co-authors, have been accepted for publication in this special issue, representing an acceptance rate of 33 %. The accepted papers were revised and endorsed by the initial reviewers and the editors. We provide a summary of each paper in the following.

‘Combining organisational and physical location to manage knowledge dissemination’, by Allen, Tomlin and Hauptman, brings together the use of organisational structure and architecture and tests the sensitivity of communication to varying positions in physical and organisational space. Results are presented from two very different organisations showing how communication probability varies with different degrees of physical and organisational separation.

‘Organisational approaches to build a radical innovation dynamic capability’, by O’Connor, Paulson and DeMartino, reports a longitudinal study conducted over a 3.5 year time horizon, in which 12 US large established companies’ radical innovation capability building initiatives were followed. This qualitative study contributes to our understanding of dynamic capabilities development in situations where the capability itself is antithetical to the mainstream culture and processes.

‘The formation of subsequent inter-firm R&D partnerships between large pharmaceutical companies and small, entrepreneurial biotechnology firms – how important is inter-organisational trust?’, by Hagedoorn, Roijakkers and Kranenburg, analyses the role of inter-organisational trust in pharmaceutical biotechnology, an industry characterised by a strong dual market structure.

‘The role of leader personality in new product development success: an examination of teams developing radical and incremental innovations’ by Aronson, Reilly and Lynn, empirically tests the role of leader personality in the success of two different types of new product development teams: radical and incremental.

‘Failure sources in R&D consortia: the case of mobile service development’, by Mahnke and Overby, focuses on uncovering how value is created and why value may dissipate in the process of managing innovation in R&D consortia in emerging high-tech markets.

‘Radical strategic and structural change: occurrence, antecedents and consequences’, by Wischnovsky and Damanpour, examines the key factors that facilitate radical strategic and structural change and the performance consequences associated with each type of change. This research analyses a sample of bank holding companies in the USA over 20 years.

‘The role of techno-countervailing power in inducing the development and dissemination of new functionality – an analysis of Canon printers and Japan’s personal computers’, by Watanabe and Lei, empirically analyses the interacting dynamism between technological development and production in the printers market, as well as subsequent demand expansion of the personal computer market driven by new functionality development of printers.

‘Leveraging in-house R&D competencies for a new market: how Corning pioneered fibre optics’, by Gattani, examines how established firms create new radical technologies by redeploying the existing knowledge into other domains than those in which that knowledge was originally accumulated.

‘Allocating resources to disruptive innovation projects: challenging mental models and overcoming management resistance’, by Lettice and Thomond, probes an overlooked unit of analysis in innovation management literature, namely management action and cognition, and offers a new qualitative contribution into resource allocation approaches that support radical and, in particular, disruptive innovations.

‘An empirical investigation on the appropriateness of flexibility approach to the product portfolio selection’, by Santiago, conducts an empirical investigation on a flexibility approach to select projects and allocate budget in a portfolio of R&D projects.

‘Community of self-organisation: supply chain perspective of Finnish electronic music’, by Hardaker and Graham, analyses the overlapping of consumption and production on the supply chain for electronic dance music sector in Finland.

‘Market performance and technological knowledge transfer of foreign subsidiaries’ network embeddedness in Taiwan’s electrical and electronic industry’, by Cheng-Wen Lee, explores the importance of foreign subsidiaries’ network embeddedness as a strategic resource for market performance and technological competence in multinational enterprises.

‘The role of communication and coordination between network lead companies and their strategic partners in determining NPD projects performance’, by Badir, Büchel and Tucci, proposes a contingency model and develops a condition of fit between contextual factors that characterises high-tech NPD projects and the intensity level of communication and coordination between the network lead company and its project’s strategic partners.

### **3 Conclusion**

I believe these papers present an excellent cross-section of research in radical innovation and related intersecting areas of strategy and technology management, in networks of high-tech strategic partners. I hope they provide a useful contribution to our particular area of endeavour.

Due to globalisation and economic liberalisation, the competition in the worldwide market is no longer firm against firm, but network against network. My prediction is that as networking for innovation proliferates, extensive research will be conducted in the future for a more thorough understanding of the subtleties that explain the strengths and weaknesses of the links between partners in the network. The investigatory material presented here is indicative of the range of research directions that the new research may take.

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